EXHIBIT 9

#	USP 5,625,410	U.S. Patent No. 5,481,297 Filing date: 2/25/1994 Issue date: 1/2/1996
	Asserted claims	**Cash**
8.1	8. The method of simultaneously displaying and storing multiple video images, comprising the steps of:	"The described video communication system incorporates multiple window display." Abstract. "To this end, each work station 12, 22 and 32 includes a multipoint encoder circuit... which enables... simultaneous reception and display of digital video signals from a plurality of nodes." 4: 16-22. "The frame buffer stores the video data as it is to appear on the video screen of the receiving node user." 12: 21-23. FIG. 1 and accompanying text.
8.2	receiving video images from a plurality of sources;	"A receiving node receives a plurality of video sequences from a plurality of transmission nodes through a communication network." 2: 65-67. "The decoder 414 of incoming video sequences has the ability to receive and decode a plurality of incoming video sequences from unrelated sources." 9: 34-36. "FIG. 3 illustrates a function block diagram of a multi-point decoder circuit which is capable of receiving, decoding and displaying video data from a plurality of sources..." 3: 36-39. FIG. 3 and accompanying text.
8.3	digitizing one or more of the images if not already in digital form;	"The multipoint encoder circuit 200 operates in accordance with the MPEG2 video compression standard." 5: 19-21. "Because the A/D Converter 204 digitizes the NTSC signal as it is received, the resulting digital signal is likewise divided into two fields." 6: 17-19. "The encoding device encodes or compresses each macroblock individually." 7: 23-25. "In operation, the input buffer 502 receives a bit stream of compressed macroblocks for a plurality of video sequences along with their corresponding macroblock IDs from a depacketizer such as depacketizer 506 from FIG. 4." 10: 7-10. FIG. 2, including Encoding Device 240 and A/D Converter 204 and accompanying text.
8.4	displaying at least certain of the digitized images in separate windows on a display device, using a first, predetermined frame rate and resolution associated with each window; and	"The described video communication system incorporates multiple window display." Abstract. "The node 12 comprises a work station including a video display 10 and a video camera 14... Display windows 17-1, 17-2 and 17-3 appear on the video display 10." 4: 3-5. "One of more video transmission nodes provide macroblocks of video data available in a plurality of resolution levels....The frame buffer provides the window configured video data to a display." Abstract. "It is therefore advantageous to make video data available at a plurality

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		of window sizes or resolution levels." 2: 36-37. "...each video transmitter provides a plurality of video sequences, each independently containing the data signal for a particular resolution level of the same video image." 2: 44-46. "Each user than transmits a digital video signal comprising a plurality of video sequences, each containing a different resolution level of the image captured by cameras 14, 24 and 34 to the network 70." 4: 37-40. "The reference frame store must therefore contain reference frame information for all four resolution level video sequences." 7: 36-38. "Furthermore, if one of the users desires to change the display window size, and hence resolution..." 13: 61-62. FIG. 1 and accompanying text. FIG. 2, including Buffer 244 and Reference Frame Store 232 and accompanying text.
8.5	simultaneously storing the displayed images using a second, predetermined frame rate and resolution associated with each image.	"The decoding device 414 thereafter decompresses or decodes the macroblocks suitable for storage and eventual display... 9: 21-23. "The decoder is further coupled to both a context random access memory 514 and an reference frame storage device 516." 9: 65-67. "The frame buffer 516 stores the video data as it is to appear on the video screen of the receiving node user." 12: 21-23. "Alternatively, one or more of the users may be replaced by a video storage device of some sort from which the remaining users access video data." 13: 33-35. FIG. 3, including Decoder 414 and accompanying text. FIG. 4, including Content RAM 514, Reference Frame Store 516 and Frame Buffer 518 and accompanying text.
12.1	12. The method of simultaneously displaying and storing multiple video images, comprising the steps of:	"The described video communication system incorporates multiple window display." Abstract. "To this end, each work station 12, 22 and 32 includes a multipoint encoder circuit... which enables... simultaneous reception and display of digital video signals from a plurality of nodes." 4: 16-22. "The frame buffer stores the video data as it is to appear on the video screen of the receiving node user." 12: 21-23. FIG. 1 and accompanying text.
12.2	receiving video images from a plurality of sources;	"A receiving node receives a plurality of video sequences from a plurality of transmission nodes through a communication network." 2: 65-67. "The decoder 414 of incoming video sequences has the ability to receive and decode a plurality of incoming video sequences from unrelated sources." 9: 34-36.

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		"FIG. 3 illustrates a function block diagram of a multi-point decoder circuit which is capable of receiving, decoding and displaying video data from a plurality of sources..." 3: 36-39. FIG. 3 and accompanying text.
12.3	digitizing one or more of the images if not already in digital form;	"The multipoint encoder circuit 200 operates in accordance with the MPEG2 video compression standard." 5: 19-21. "Because the A/D Converter 204 digitizes the NTSC signal as it is received, the resulting digital signal is likewise divided into two fields." 6: 17-19. "The encoding device encodes or compresses each macroblock individually." 7: 23-25. "In operation, the input buffer 502 receives a bit stream of compressed macroblocks for a plurality of video sequences along with their corresponding macroblock IDs from a depacketizer such as depacketizer 506 from FIG. 4." 10: 7-10. FIG. 2, including Encoding Device 240 and A/D Converter 204 and accompanying text.
12.4	displaying at least certain of the digitized images in separate windows on a display device, using a first set of temporal and spatial parameters associated with each image in each window;	"Users A, B and C then select a display preference by choosing the size and placement of windows in which the video from each participant, A, B and C will be viewed." 4: 50-52. "The described video communication system incorporates multiple window display." Abstract. "The node 12 comprises a work station including a video display 10 and a video camera 14... Display windows 17-1, 17-2 and 17-3 appear on the video display 10." 4: 3-5. "One of more video transmission nodes provide macroblocks of video data available in a plurality of resolution levels....The frame buffer provides the window configured video data to a display." Abstract. "It is therefore advantageous to make video data available at a plurality of window sizes or resolution levels." 2: 36-37. "...each video transmitter provides a plurality of video sequences, each independently containing the data signal for a particular resolution level of the same video image." 2: 44-46. "Each user than transmits a digital video signal comprising a plurality of video sequences, each containing a different resolution level of the image captured by cameras 14, 24 and 34 to the network 70." 4: 37-40. "The reference frame store must therefore contain reference frame information for all four resolution level video sequences." 7: 36-38. "Furthermore, if one of the users desires to change the display window

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		size, and hence resolution..." 13: 61-62. FIG. 1 and accompanying text. FIG. 2, including Buffer 244 and Reference Frame Store 232 and accompanying text.
12.5	simultaneously storing the displayed images using a second set of temporal and spatial parameters associated with each image.	"The decoding device 414 thereafter decompresses or decodes the macroblocks suitable for storage and eventual display... 9: 21-23. "The decoder is further coupled to both a context random access memory 514 and an reference frame storage device 516." 9: 65-67. "The frame buffer 516 stores the video data as it is to appear on the video screen of the receiving node user." 12: 21-23. "Alternatively, one or more of the users may be replaced by a video storage device of some sort from which the remaining users access video data." 13: 33-35. FIG. 3, including Decoder 414 and accompanying text. FIG. 4, including Content RAM 514, Reference Frame Store 516 and Frame Buffer 518 and accompanying text.
15.1	15. A video storage and display system, comprising:	"The described video communication system incorporates multiple window display." Abstract. "To this end, each work station 12, 22 and 32 includes a multipoint encoder circuit... which enables... simultaneous reception and display of digital video signals from a plurality of nodes." 4: 16-22. "The frame buffer stores the video data as it is to appear on the video screen of the receiving node user." 12: 21-23. FIG. 1 and accompanying text.
15.2	a plurality of video cameras, each outputting a signal representative of a video image;	"A multipoint encoder circuit capable of producing up to four sequences of video data representing four different resolutions of video receives a [NTSC] analog video signal on input line. The source of the signal may be one of the video cameras..." 5: 14-18. "The video cameras 14, 24 and 34 provide video signals for transmission and the video displays 10, 20 and 30 receive and display video signals." 4: 14-16. FIG. 1 and accompanying text.
15.3	means to receive the signals from each camera and digitally compress the images; and	Means to receive the signals from each camera and digitally compress the images is Encoding Device 240, A/D Converter 204, and Input Buffer 502. "A decoder thereafter decompresses the video data one macroblock at a time, and provides the decompressed macroblock to a frame buffer." Abstract.

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		"The multipoint encoder circuit 200 operates in accordance with the MPEG2 video compression standard." 5: 19-21. "Because the A/D Converter 204 digitizes the NTSC signal as it is received, the resulting digital signal is likewise divided into two fields." 6: 17-19. "The encoding device encodes or compresses each macroblock individually." 7: 23-25. "In operation, the input buffer 502 receives a bit stream of compressed macroblocks for a plurality of video sequences along with their corresponding macroblock IDs from a depacketizer such as depacketizer 506 from FIG. 4." 10: 7-10. FIG. 2, including Encoding Device 240 and A/D Converter 204 and accompanying text.
15.4	a computer configured to receive the digitally compressed images, the computer being interfaced to the following devices:	"The decoder 512 is operably connected to a video frame buffer 518. The frame buffer 518 includes sufficient memory for at least one frame of video data. The frame buffer 518 is then connected to the display controller 418 of FIG. 3." 10: 3-6. "The frame buffer 516 stores the video data as it is to appear on the video screen of the receiving node user." 12: 21-23. FIG. 4, Frame Buffer 518 and accompanying text.
15.5	a display screen,	"The frame buffer provides the window configured video data to a display." Abstract. FIG. 1 and accompanying text.
15.6	means to receive externally derived operator commands including means for sensing a deviation from the normal-state image scene associated with at least one of the video cameras, the existence of the deviation being used as the basis for generating an externally derived command, and	To the extent the reference does not explicitly disclose means to receive externally derived operator commands, Defendants assert that this limitation is inherent in this disclosure.
15.7	a high-capacity storage medium, and programmed to perform the following functions:	"The decoding device 414 thereafter decompresses or decodes the macroblocks suitable for storage and eventual display... 9: 21-23. "The decoder is further coupled to both a context random access memory 514 and an reference frame storage device 516." 9: 65-67. "The frame buffer 516 stores the video data as it is to appear on the video screen of the receiving node user." 12: 21-23. "Alternatively, one or more of the users may be replaced by a video storage device of some sort from which the remaining users access video data." 13: 33-35. FIG. 3, including Decoder 414 and accompanying text.

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		FIG. 4, including Content RAM 514, Reference Frame Store 516 and Frame Buffer 518 and accompanying text.
15.8	display the digitally compressed images from the cameras in different windows on the display screen, each window being associated with an update rate and dimensions in pixels,	"The described video communication system incorporates multiple window display." Abstract. "The node 12 comprises a work station including a video display 10 and a video camera 14... Display windows 17-1, 17-2 and 17-3 appear on the video display 10." 4: 3-5. "One of more video transmission nodes provide macroblocks of video data available in a plurality of resolution levels....The frame buffer provides the window configured video data to a display." Abstract. "It is therefore advantageous to make video data available at a plurality of window sizes or resolution levels." 2: 36-37. "...each video transmitter provides a plurality of video sequences, each independently containing the data signal for a particular resolution level of the same video image." 2: 44-46. "The reference frame store must therefore contain reference frame information for all four resolution level video sequences." 7: 36-38. "Furthermore, if one of the users desires to change the display window size, and hence resolution..." 13: 61-62. FIG. 1 and accompanying text. FIG. 2, including Buffer 244 and Reference Frame Store 232 and accompanying text.
15.9	vary the dimensions and the rate at which a particular image is updated in its window in accordance with one of the externally derived commands,	Discloses video "users" or consumers who can externally alter the display system. "Users A, B and C then select a display preference by choosing the size and placement of windows in which the video from each participant, A, B and C will be viewed." 4: 50-52. "Furthermore, if one of the users desires to change the display window size, and hence resolution...the bridge merely connects the user to the video sequence of the appropriate resolution level." 13: 61-66.
15.10	store the digitally compressed images in the high-capacity storage medium, and	"The decoding device 414 thereafter decompresses or decodes the macroblocks suitable for storage and eventual display... 9: 21-23. "The decoder is further coupled to both a context random access memory 514 and an reference frame storage device 516." 9: 65-67. "The frame buffer 516 stores the video data as it is to appear on the video screen of the receiving node user." 12: 21-23. "Alternatively, one or more of the users may be replaced by a video storage device of some sort from which the remaining users access

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		video data." 13: 33-35. FIG. 3, including Decoder 414 and accompanying text. FIG. 4, including Content RAM 514, Reference Frame Store 516 and Frame Buffer 518 and accompanying text.
15.11	vary the dimensions and the rate at which a particular image is stored in accordance with one of the externally derived commands.	"The decoding device 414 thereafter decompresses or decodes the macroblocks suitable for storage and eventual display... 9: 21-23. "The decoder is further coupled to both a context random access memory 514 and an reference frame storage device 516." 9: 65-67. "The frame buffer 516 stores the video data as it is to appear on the video screen of the receiving node user." 12: 21-23. "Alternatively, one or more of the users may be replaced by a video storage device of some sort from which the remaining users access video data." 13: 33-35. FIG. 3, including Decoder 414 and accompanying text. FIG. 4, including Content RAM 514, Reference Frame Store 516 and Frame Buffer 518 and accompanying text.

EXHIBIT 10

#	USP 5,625,410	U.S. Patent No. 4,943,854 Filing date: 11/17/1985 Issue date: 7/24/1990
	Asserted claims	**Shiota**
8.1	8. The method of simultaneously displaying and storing multiple video images, comprising the steps of:	"The multi-video recorder incorporates a multiplexing means permitting selection of the video signal from each of plurality of TV cameras according to a predetermined importance of priority." Abstract. "The memory is provided to store the digital video signals for one field or frame..." 4: 57-58. FIG. 1 and accompanying text.
8.2	receiving video images from a plurality of sources;	"The above object can be attained by providing according to the present invention, a multi-video recorder comprising a plurality of TV cameras, means permitting transmission by one line and recording by one VTR, the video signals from the plural TV cameras, by selecting the video signals according to the predetermined importance..." 1: 63-67.
8.3	digitizing one or more of the images if not already in digital form;	"The A/D converter 74 converts input signal as analog input into a digital video signal in response to a timing signal from the timing generator." 4: 54-56. FIG 1, including A/D Converter 74 and accompanying text.
8.4	displaying at least certain of the digitized images in separate windows on a display device, using a first, predetermined frame rate and resolution associated with each window; and	"The multi-video recorder incorporates a multiplexing means permitting selection of the video signal from each of plurality of TV cameras according to a predetermined importance of priority." Abstract. Discloses that "output signal" is also known as "time shared multiplexed video signal" and is sent from the multiplexer to Video Tape Recorder ("VTR") where it is then "used as a recording and a simultaneous monitoring signal." 4: 31-35. "Therefore, the object of the present invention is to... provide selective monitoring of any important spots and any spots with any change in events." 1: 54-62. "...D/A converter to convert digital video signal from the memory into an analog video signal for transmission to the picture monitor;" 3: 56-58. "The D/A converter 76 always delivers to the picture monitor 9 the contents of the memory 75 as video signal..." 5: 1-2. FIG. 1, including Picture Monitor 9 and accompanying text.
8.5	simultaneously storing the displayed images using a second, predetermined frame rate and resolution associated with each image.	"The memory is provided to store the digital video signals for one field or frame..." 4: 57-58. "The D/A converter 76 always delivers to the picture monitor 9 the contents of the memory 75 as video signal..." 5: 1-2. "It should be noted that the term "recording (selection) according to the importance" used herein with reference to the equipment of the invention means recording with reduced number of recording frames for any event of a relatively slow motion or lower importance and with increased number of recording frames for any high speed or important event..." 2: 19-25. FIG. 1, including Memory 75 and accompanying text.
12.1	12. The method of simultaneously	"The multi-video recorder incorporates a multiplexing means permitting

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	displaying and storing multiple video images, comprising the steps of:	selection of the video signal from each of plurality of TV cameras according to a predetermined importance of priority." Abstract. "The memory is provided to store the digital video signals for one field or frame..." 4: 57-58. FIG. 1 and accompanying text.
12.2	receiving video images from a plurality of sources;	"The above object can be attained by providing according to the present invention, a multi-video recorder comprising a plurality of TV cameras, means permitting transmission by one line and recording by one VTR, the video signals from the plural TV cameras, by selecting the video signals according to the predetermined importance." 1: 63-67.
12.3	digitizing one or more of the images if not already in digital form;	"The A/D converter 74 converts input signal as analog input into a digital video signal in response to a timing signal from the timing generator." 4: 54-56. FIG 1, including A/D Converter 74 and accompanying text.
12.4	displaying at least certain of the digitized images in separate windows on a display device, using a first set of temporal and spatial parameters associated with each image in each window;	"The multi-video recorder incorporates a multiplexing means permitting selection of the video signal from each of plurality of TV cameras according to a predetermined importance of priority." Abstract. Discloses that "output signal" is also known as "time shared multiplexed video signal" and is sent from the multiplexer to Video Tape Recorder ("VTR") where it is then "used as a recording and a simultaneous monitoring signal." 4: 31-35. "Therefore, the object of the present invention is to... provide selective monitoring of any important spots and any spots with any change in events." 1: 54-62. "...D/A converter to convert digital video signal from the memory into an analog video signal for transmission to the picture monitor," 3: 56-58. "The D/A converter 76 always delivers to the picture monitor 9 the contents of the memory 75 as video signal..." 5: 1-2. FIG. 1, including Picture Monitor 9 and accompanying text.
12.5	simultaneously storing the displayed images using a second set of temporal and spatial parameters associated with each image.	"The memory is provided to store the digital video signals for one field or frame..." 4: 57-58. "The D/A converter 76 always delivers to the picture monitor 9 the contents of the memory 75 as video signal..." 5: 1-2. "It should be noted that the term "recording (selection) according to the importance" used herein with reference to the equipment of the invention means recording with reduced number of recording frames for any event of a relatively slow motion or lower importance and with increased number of recording frames for any high speed or important event..." 2: 19-25. FIG. 1, including Memory 75 and accompanying text.
15.1	15. A video storage and display system, comprising:	"The multi-video recorder incorporates a multiplexing means permitting selection of the video signal from each of plurality of TV cameras

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		according to a predetermined importance of priority." Abstract. "The memory is provided to store the digital video signals for one field or frame..." 4: 57-58. FIG. 1 and accompanying text.
15.2	a plurality of video cameras, each outputting a signal representative of a video image;	"The above object can be attained by providing according to the present invention, a multi-video recorder comprising a plurality of TV cameras, means permitting transmission by one line and recording by one VTR, the video signals from the plural TV cameras, by selecting the video signals according to the predetermined importance." 1: 63-67. FIG. 1, including TV Cameras ("C") and accompanying text.
15.3	means to receive the signals from each camera and digitally compress the images; and	Means to receive the signals from each camera and digitally compress the images is A/D Converter 74. "The A/D converter 74 converts input signal as analog input into a digital video signal in response to a timing signal from the timing generator." 4: 54-56. FIG 1, including A/D Converter 74 and accompanying text.
15.4	a computer configured to receive the digitally compressed images, the computer being interfaced to the following devices:	Discloses a "data processor" which receives the "preset importance data from the operational panel." 4: 21-22. FIG. 1, including Data Processor 45 and accompanying text.
15.5	a display screen,	Discloses "picture monitor" as component of the claimed invention. 3: 31; 3: 58; 5: 1-2; 5: 9. "Therefore, the object of the present invention is to... provide selective monitoring of any important spots and any spots with any change in events." 1: 54-62. "...D/A converter to convert digital video signal from the memory into an analog video signal for transmission to the picture monitor;" 3: 56-58. FIG. 1, including Picture Monitor 9
15.6	means to receive externally derived operator commands including means for sensing a deviation from the normal-state image scene associated with at least one of the video cameras, the existence of the deviation being used as the basis for generating an externally derived command, and	Means to receive externally derived operator commands is Operation Panel 2 and Data Processor 45. Means for sensing a deviation from the normal-state image scene associated with at least one of the video cameras is Interrupt Controller 46 and Sensors. "A multi-video surveillance system for the surveillance of a plurality of positions, comprising... sensing means for producing output signals in response to the determination of the occurrence or non-occurrence of a predetermined physical event at least one of said positions..." Claim 1. Discloses that "output signal" is also known as "time shared multiplexed video signal" and is sent from the multiplexer to Video Tape Recorder ("VTR") where it is then "used as a recording and a simultaneous monitoring signal." 4: 31-35. "Therefore, the object of the present invention is to... provide selective

#	USP 5,625,410	U.S. Patent No. 4,943,854 Filing date: 11/17/1988 Issue date: 7/24/1990
		monitoring of any important spots and any spots with any change in events." 1: 54-62. Discloses invention featuring "sensor including a plurality of sensors to detect any event (interrupt factor) due to which the importance is to be changed." 3: 23-25. Discloses that signal "importance" is manifested by number of recording frames, or frame rate. "...any change in video information can be flexibly accommodated by making it possible to change the importance of any door picture by the input from the sensors such as door switch, proximity switch, etc." 3: 9-12. "The interrupt controller detects any of interrupt signals generated by the sensors, and transmit an event information (interrupt information) to the data processor." 4: 17-20. "The data processor compares a select command from the operation panel operated by an operator to select new matter, a video signal delivered from any one of the TV cameras..." 4: 45-48. The data processor receives "select command" from the operation panel (3: 50-52); operational panel provides for "automatic selection of any of the plural TV cameras according to their importance." 3: 20-22. FIG. 1, including Data Processor 45, VTR 6, Operation Panel 2, Interrupt Controller 46 and Sensors ("S") and accompanying text.
15.7	a high-capacity storage medium, and programmed to perform the following functions:	"The memory is provided to store the digital video signals for one field or frame..." 4: 57-58. "The D/A converter 76 always delivers to the picture monitor 9 the contents of the memory 75 as video signal..." 5: 1-2. "It should be noted that the term "recording (selection) according to the importance" used herein with reference to the equipment of the invention means recording with reduced number of recording frames for any event of a relatively slow motion or lower importance and with increased number of recording frames for any high speed or important event..." 2: 19-25. FIG. 1, including Memory 75 and accompanying text.
15.8	display the digitally compressed images from the cameras in different windows on the display screen, each window being associated with an update rate and dimensions in pixels,	"The multi-video recorder incorporates a multiplexing means permitting selection of the video signal from each of plurality of TV cameras according to a predetermined importance of priority." Abstract. "Therefore, the object of the present invention is to... provide selective monitoring of any important spots and any spots with any change in events." 1: 54-62. "...D/A converter to convert digital video signal from the memory into an analog video signal for transmission to the picture monitor," 3: 56-58. FIG. 1, including Picture Monitor 9 and accompanying text.

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15.9	vary the dimensions and the rate at which a particular image is updated in its window in accordance with one of the externally derived commands,	"The multi-video recorder incorporates a multiplexing means permitting selection of the video signal from each of plurality of TV cameras according to a predetermined importance of priority." Abstract. "Therefore, the object of the present invention is to... provide selective monitoring of any important spots and any spots with any change in events." 1: 54-62. "...D/A converter to convert digital video signal from the memory into an analog video signal for transmission to the picture monitor;" 3: 56-58. FIG. 1, including Picture Monitor 9 and accompanying text.
15.10	store the digitally compressed images in the high-capacity storage medium, and	"The memory is provided to store the digital video signals for one field or frame..." 4: 57-58. "The D/A converter 76 always delivers to the picture monitor 9 the contents of the memory 75 as video signal..." 5: 1-2. "It should be noted that the term "recording (selection) according to the importance" used herein with reference to the equipment of the invention means recording with reduced number of recording frames for any event of a relatively slow motion or lower importance and with increased number of recording frames for any high speed or important event..." 2: 19-25. FIG. 1, including Memory 75 and accompanying text.
15.11	vary the dimensions and the rate at which a particular image is stored in accordance with one of the externally derived commands.	"The memory is provided to store the digital video signals for one field or frame..." 4: 57-58. "The D/A converter 76 always delivers to the picture monitor 9 the contents of the memory 75 as video signal..." 5: 1-2. "It should be noted that the term "recording (selection) according to the importance" used herein with reference to the equipment of the invention means recording with reduced number of recording frames for any event of a relatively slow motion or lower importance and with increased number of recording frames for any high speed or important event..." 2: 19-25. FIG. 1, including Memory 75 and accompanying text.

EXHIBIT 11

#	USP 5,625,410	U.S. Patent No. 5,229,850 Filing date: 7/29/1991 Issue date: 7/20/1993
	Asserted claims	**Toyoshima**
8.1	8. The method of simultaneously displaying and storing multiple video images, comprising the steps of:	"If there is a plurality of such sending stations and video signals acquired by the respective sending stations are monitored together by a single receiving station, the video monitoring system according to the present invention is also advantageous." 3: 14-18. "FIG. 7 also shows a third embodiment of the video monitoring system...includes a plurality of video transmitters as video sending stations and is intended to monitor the videos obtained by those stations using a single receiver." 10: 64 – 11: 1. "Thus, video signals generated immediately after the sensor detects the occurrence of a particular event, which are usually most important in the security system or ITV system, can be stored in the memory." 2: 15-18. "[A]ccording to the process for acquiring and transmitting the video in the manner shown in FIG. 4, the video of the object existing at the occurrence of the particular event and regarded as the most important is surely captured and stored." 8: 51-55.
8.2	receiving video images from a plurality of sources;	"FIG. 7 also shows a third embodiment of the video monitoring system...includes a plurality of video transmitters as video sending stations and is intended to monitor the videos obtained by those stations using a single receiver." 10: 64 – 11: 1. FIG. 7 and accompanying text.
8.3	digitizing one or more of the images if not already in digital form;	"The video transmitter 1 includes an A/D converter having various functions necessary for converting an analog video signal outputted from the television camera to a digital video signal as well as converting the digital video signal to image data..." 4: 7-11. "...it first enables the A/D converter 12, puts the frame memory 13A in a write-enabled state, converts to a digital video signal an analog video signal corresponding to the video of the object..." 6: 2-5. "An image synthesizing circuit 62 synthesizes the character image produced by the image forming circuit 61 and the digital signal to which the video is converted by the A/D converter 12 and writes the synthetic image in the frame memory 13A." 10: 49-53. FIGS. 5-7, 9(a)-9(e), including A/D Converter 12 and accompanying text.
8.4	displaying at least certain of the digitized images in separate windows on a display device, using a first, predetermined frame rate and resolution associated with each window; and	"A CRT display connected to the video receiver 2 reproduces as a monitored image the analog video signal outputted by the D/A converter 23." 5: 3-5. "The video signals stored in the frame memory can be monitored with a minimum resolution." 2: 28-30. "If there is a plurality of such sending stations and video signals acquired by the respective sending stations are monitored together by a single receiving station, the video monitoring system according to the present invention is also advantageous." 3: 14-18. "The memory is used as a buffer means for adjusting the timing at which

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		the video signals outputted from television camera 11 and obtained by picking up the state of the object after the communication path is established between the transmitter and the receiver 2 are transmitted on a real time basis." 4: 32-37. "The video receiver 2 further inputs the thus obtained analog video signals to the CRT display 24 to reproduce the transmitted videos." 8: 20-22. FIGS. 1, 5, 7, including CRT 24 and accompanying text.
8.5	simultaneously storing the displayed images using a second, predetermined frame rate and resolution associated with each image.	"[A]ccording to the process for acquiring and transmitting the video in the manner shown in FIG. 4, the video of the object existing at the occurrence of the particular event and regarded as the most important is surely captured and stored." 8: 51-55. "In the video monitoring system... the video of the object existing at the occurrence of the particular event is stored in an image memory on the basis of the output of the sensor indicative of such sensing." Abstract. "The video signal stored in the memory is transmitted to the receiving station at any time." 2: 9-10. "The video signals stored in the frame memory can be monitored with a minimum resolution." 2: 28-30. "Frame memories 13A and 13B each has a capacity large enough to store the A/D converted video signal..." 4: 22-23. FIG. 2, 10, including Stored Video Signal and accompanying text. FIG. 3, including 302 and accompanying text. FIG. 4, including 402 and accompanying text. FIGS. 1, 3, 4, 5-7, 9(a)-(e), including Frame Memories 13A and 13B and accompanying text.
12.1	12. The method of simultaneously displaying and storing multiple video images, comprising the steps of:	"If there is a plurality of such sending stations and video signals acquired by the respective sending stations are monitored together by a single receiving station, the video monitoring system according to the present invention is also advantageous." 3: 14-18. "FIG. 7 also shows a third embodiment of the video monitoring system...includes a plurality of video transmitters as video sending stations and is intended to monitor the videos obtained by those stations using a single receiver." 10: 64 – 11: 1. "Thus, video signals generated immediately after the sensor detects the occurrence of a particular event, which are usually most important in the security system or ITV system, can be stored in the memory." 2: 15-18. "[A]ccording to the process for acquiring and transmitting the video in the manner shown in FIG. 4, the video of the object existing at the occurrence of the particular event and regarded as the most important is surely captured and stored." 8: 51-55.
12.2	receiving video images from a plurality of sources;	"FIG. 7 also shows a third embodiment of the video monitoring system...includes a plurality of video transmitters as video sending

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		stations and is intended to monitor the videos obtained by those stations using a single receiver." 10: 64 – 11: 1. FIG. 7 and accompanying text.
12.3	digitizing one or more of the images if not already in digital form;	"The video transmitter 1 includes an A/D converter having various functions necessary for converting an analog video signal outputted from the television camera to a digital video signal as well as converting the digital video signal to image data..." 4: 7-11. "...it first enables the A/D converter 12, puts the frame memory 13A in a write-enabled state, converts to a digital video signal an analog video signal corresponding to the video of the object..." 6: 2-5. "An image synthesizing circuit 62 synthesizes the character image produced by the image forming circuit 61 and the digital signal to which the video is converted by the A/D converter 12 and writes the synthetic image in the frame memory 13A." 10: 49-53. FIGS. 5-7, 9(a)-9(e), including A/D Converter 12 and accompanying text.
12.4	displaying at least certain of the digitized images in separate windows on a display device, using a first set of temporal and spatial parameters associated with each image in each window;	"A CRT display connected to the video receiver 2 reproduces as a monitored image the analog video signal outputted by the D/A converter 23." 5: 3-5. "The video signals stored in the frame memory can be monitored with a minimum resolution." 2: 28-30. "If there is a plurality of such sending stations and video signals acquired by the respective sending stations are monitored together by a single receiving station, the video monitoring system according to the present invention is also advantageous." 3: 14-18. "The memory is used as a buffer means for adjusting the timing at which the video signals outputted from television camera 11 and obtained by picking up the state of the object after the communication path is established between the transmitter and the receiver 2 are transmitted on a real time basis." 4: 32-37. "The video receiver 2 further inputs the thus obtained analog video signals to the CRT display 24 to reproduce the transmitted videos." 8: 20-22. FIGS. 1, 5, 7, including CRT 24 and accompanying text.
12.5	simultaneously storing the displayed images using a second set of temporal and spatial parameters associated with each image.	"[A]ccording to the process for acquiring and transmitting the video in the manner shown in FIG. 4, the video of the object existing at the occurrence of the particular event and regarded as the most important is surely captured and stored." 8: 51-55. "The use of memory means having a large capacity permits acquisition of video images of a plurality of screens lasting several seconds to several minutes." 2: 30-32. "In the video monitoring system... the video of the object existing at the occurrence of the particular event is stored in an image memory on the

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		basis of the output of the sensor indicative of such sensing." Abstract. "The video signal stored in the memory is transmitted to the receiving station at any time." 2: 9-10. "The video signals stored in the frame memory can be monitored with a minimum resolution." 2: 28-30. "Frame memories 13A and 13B each has a capacity large enough to store the A/D converted video signal..." 4: 22-23. FIGS. 2, 10, including Stored Video Signal and accompanying text. FIG. 3, including 302 and accompanying text. FIG. 4, including 402 and accompanying text. FIGS. 1, 3, 4, 5-7, 9(a)-(e), including Frame Memories 13A and 13B and accompanying text.
15.1	15. A video storage and display system, comprising:	"If there is a plurality of such sending stations and video signals acquired by the respective sending stations are monitored together by a single receiving station, the video monitoring system according to the present invention is also advantageous." 3: 14-18. "FIG. 7 also shows a third embodiment of the video monitoring system...includes a plurality of video transmitters as video sending stations and is intended to monitor the videos obtained by those stations using a single receiver." 10: 64 – 11: 1. "Thus, video signals generated immediately after the sensor detects the occurrence of a particular event, which are usually most important in the security system or ITV system, can be stored in the memory." 2: 15-18. "[A]ccording to the process for acquiring and transmitting the video in the manner shown in FIG. 4, the video of the object existing at the occurrence of the particular event and regarded as the most important is surely captured and stored." 8: 51-55.
15.2	a plurality of video cameras, each outputting a signal representative of a video image;	"FIG. 7 also shows a third embodiment of the video monitoring system...includes a plurality of video transmitters as video sending stations and is intended to monitor the videos obtained by those stations using a single receiver." 10: 64 – 11: 1. "(1) Frame memory 13A: This memory is used to store the video signals outputted from television camera 11 and corresponding to a particular event on a monitored object." 4: 27-30. FIG. 7 and accompanying text.
15.3	means to receive the signals from each camera and digitally compress the images; and	Means to receive the signals from each camera and digitally compress the images is Video Transmitter 1, A/D Converter 12, and Image Synthesizing Circuit 62. "The video transmitter 1 includes an A/D converter having various functions necessary for converting an analog video signal outputted from the television camera to a digital video signal as well as converting the digital video signal to image data..." 4: 7-11.

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		"...it first enables the A/D converter 12, puts the frame memory 13A in a write-enabled state, converts to a digital video signal an analog video signal corresponding to the video of the object..." 6: 2-5. "An image synthesizing circuit 62 synthesizes the character image produced by the image forming circuit 61 and the digital signal to which the video is converted by the A/D converter 12 and writes the synthetic image in the frame memory 13A." 10: 49-53. FIGS. 5-7, 9(a)-9(e), including A/D Converter 12 and accompanying text.
15.4	a computer configured to receive the digitally compressed images, the computer being interfaced to the following devices:	"An image synthesizing circuit 62 synthesizes the character image produced by the image forming circuit 61 and the digital signal to which the video signal is converted by the A/D converter 12 and writes the synthetic image in the frame memory 13." 10: 49-53. FIG. 6, including Image Synthesizer 62
15.5	a display screen,	"A CRT display connected to the video receiver 2 reproduces as a monitored image the analog video signal outputted by the D/A converter 23." 5: 3-5. "The video signals stored in the frame memory can be monitored with a minimum resolution." 2: 28-30. "If there is a plurality of such sending stations and video signals acquired by the respective sending stations are monitored together by a single receiving station, the video monitoring system according to the present invention is also advantageous." 3: 14-18. "The video receiver 2 further inputs the thus obtained analog video signals to the CRT display 24 to reproduce the transmitted videos." 8: 20-22. FIGS. 1, 5, 7, including CRT 24 and accompanying text.
15.6	means to receive externally derived operator commands including means for sensing a deviation from the normal-state image scene associated with at least one of the video cameras, the existence of the deviation being used as the basis for generating an externally derived command, and	Means to receive externally derived operator commands is Control Console 26. Means for sensing a deviation from the normal-state image scene associated with at least one of the video cameras is Sensor 15. "...the sending station comprises a memory for storing a video signal on an object corresponding to a particular event to be monitored, a sensor for detecting the occurrence of a particular event to be monitored, and a control unit for storing in memory the video signal outputted from an image pickup....whereby....the stored video signal is ready from the memory and transmitted to the receiving station." 1: 65 – 2: 8. "A control console 26 connected to the video receiver 2 is used by the operator to input a request for switching between the video signal (stored in the frame memory 13A), for example, existing at the occurrence of the particular event and the subsequent real-time signal (transmitted through the frame memory 13B), etc." 5: 5-11. "The video signal existing at the occurrence of the particular event to be

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		monitored can be reliably captured and stored and the stored video can be reproduced for monitoring purposes at any point in time in which the operator desires." 7: 16-20. "[I]f such timer is used as the sensor 15, the video transmitter 1 is started up each time the timer detects the "arrival of the preset monitor time or moment" to thereby store (update) in the frame memory 13 the video of the object at that time A." 9: 51-55. FIGS. 1, 5, 7, including Console 26 and accompanying text. FIGS. 5-6, including Sensor 15 and accompanying text.
15.7	a high-capacity storage medium, and programmed to perform the following functions:	"The use of memory means having a large capacity permits acquisition of video images of a plurality of screens lasting several seconds to several minutes." 2: 30-32. "Frame memories 13A and 13B each has a capacity large enough to store the A/D converted video signal..." 4: 22-23. "In the video monitoring system... the video of the object existing at the occurrence of the particular event is stored in an image memory on the basis of the output of the sensor indicative of such sensing." Abstract. "The video signal stored in the memory is transmitted to the receiving station at any time." 2: 9-10. "The video signals stored in the frame memory can be monitored with a minimum resolution." 2: 28-30. FIG. 2, 10, including Stored Video Signal and accompanying text. FIG. 3, including 302 and accompanying text. FIG. 4, including 402 and accompanying text. FIGS. 1, 3, 4, 5-7, 9(a)-(e), including Frame Memories 13A and 13B and accompanying text.
15.8	display the digitally compressed images from the cameras in different windows on the display screen, each window being associated with an update rate and dimensions in pixels,	"A CRT display connected to the video receiver 2 reproduces as a monitored image the analog video signal outputted by the D/A converter 23." 5: 3-5. "The video signals stored in the frame memory can be monitored with a minimum resolution." 2: 28-30. "If there is a plurality of such sending stations and video signals acquired by the respective sending stations are monitored together by a single receiving station, the video monitoring system according to the present invention is also advantageous." 3: 14-18. "The video receiver 2 further inputs the thus obtained analog video signals to the CRT display 24 to reproduce the transmitted videos." 8: 20-22. FIGS. 1, 5, 7, including CRT 24 and accompanying text.
15.9	vary the dimensions and the rate at which a particular image is updated in its window in accordance with one of	"[I]f such timer is used as the sensor 15, the video transmitter 1 is started up each time the timer detects the "arrival of the preset monitor time or moment" to thereby store (update) in the frame memory 13 the video of

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	the externally derived commands,	the object at that time A." 9: 51-55. "A CRT display connected to the video receiver 2 reproduces as a monitored image the analog video signal outputted by the D/A converter 23." 5: 3-5. "The video signals stored in the frame memory can be monitored with a minimum resolution." 2: 28-30. "If there is a plurality of such sending stations and video signals acquired by the respective sending stations are monitored together by a single receiving station, the video monitoring system according to the present invention is also advantageous." 3: 14-18. "The video receiver 2 further inputs the thus obtained analog video signals to the CRT display 24 to reproduce the transmitted videos." 8: 20-22. "A control console 26 connected to the video receiver 2 is used by the operator to input a request for switching between the video signal (stored in the frame memory 13A), for example, existing at the occurrence of the particular event and the subsequent real-time signal (transmitted through the frame memory 13B), etc." 5: 5-11. FIGS. 1, 5, 7, including CRT 24 and accompanying text. FIGS. 5-6, including Sensor 15 and accompanying text.
15.10	store the digitally compressed images in the high-capacity storage medium, and	"The use of memory means having a large capacity permits acquisition of video images of a plurality of screens lasting several seconds to several minutes." 2: 30-32. "Frame memories 13A and 13B each has a capacity large enough to store the A/D converted video signal..." 4: 22-23. "In the video monitoring system... the video of the object existing at the occurrence of the particular event is stored in an image memory on the basis of the output of the sensor indicative of such sensing." Abstract. "The video signal stored in the memory is transmitted to the receiving station at any time." 2: 9-10. "The video signals stored in the frame memory can be monitored with a minimum resolution." 2: 28-30. FIG. 2, 10, including Stored Video Signal and accompanying text. FIG. 3, including 302 and accompanying text. FIG. 4, including 402 and accompanying text. FIGS. 1, 3, 4, 5-7, 9(a)-(e), including Frame Memories 13A and 13B and accompanying text.
15.11	vary the dimensions and the rate at which a particular image is stored in accordance with one of the externally derived commands.	"The use of memory means having a large capacity permits acquisition of video images of a plurality of screens lasting several seconds to several minutes." 2: 30-32.

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		"In the video monitoring system... the video of the object existing at the occurrence of the particular event is stored in an image memory on the basis of the output of the sensor indicative of such sensing." Abstract. "The video signal stored in the memory is transmitted to the receiving station at any time." 2: 9-10. "The video signals stored in the frame memory can be monitored with a minimum resolution." 2: 28-30. "Frame memories 13A and 13B each has a capacity large enough to store the A/D converted video signal..." 4: 22-23. "A control console 26 connected to the video receiver 2 is used by the operator to input a request for switching between the video signal (stored in the frame memory 13A), for example, existing at the occurrence of the particular event and the subsequent real-time signal (transmitted through the frame memory 13B), etc." 5: 5-11. FIG. 2, 10, including Stored Video Signal and accompanying text. FIG. 3, including 302 and accompanying text. FIG. 4, including 402 and accompanying text. FIGS. 1, 3, 4, 5-7, 9(a)-(e), including Frame Memories 13A and 13B and accompanying text.

EXHIBIT 12

#	USP 5,625,410	"A Remote Multi-Camera Visual Surveillance System Using Frame-Switching Technology" Publication Date: 10/5/1988
	Asserted claims	**Chang**
8.1	8. The method of simultaneously displaying and storing multiple video images, comprising the steps of:	"[T]he authors present a REMVISE system, which contains several TV cameras with well-planned scene division of the surveillance area so as to increase both the resolution and field of view. The video signals of the cameras are combined frame by frame so that only a single TV channel or cable is needed for transmission of multiple video signals. A frame distributing containing frame grabbers is used to reconstruct the multiple camera scenes on a bank of monitors." Abstract.
8.2	receiving video images from a plurality of sources;	"Containing a set of camera heads and lenses, the TV Camera Array is mounted on a pan-and-tilt drive... The video signals are combined frame by frame through the Frame Switcher. The output of the Frame Switcher is a combined video signal, which is transmitted to the Video Transmitter to the Central Monitor Station." 105-106. "As an example for illustration, suppose that there are six cameras (n=6)." 106. FIG. 1, including TV Camera Array and accompanying text.
8.3	digitizing one or more of the images if not already in digital form;	"The memory device used in the REMVISE system is generally called a frame grabber, which has been widely used for digital image processing on personal computers and work stations." 107. FIG. 4, A/D Converter and accompanying text.
8.4	displaying at least certain of the digitized images in separate windows on a display device, using a first, predetermined frame rate and resolution associated with each window; and	"The video signals of the cameras are combined frame by frame so that only a single TV channel or cable is needed for transmission of multiple video signals. A frame distributing containing frame grabbers is used to reconstruct the multiple camera scenes on a bank of monitors." Abstract. "[T]he authors present a REMVISE system, which contains several TV cameras with well-planned scene division of the surveillance area so as to increase both the resolution and field of view." Abstract. "In a normal commercial TV system such as the NTSC standard, there are 525 scanning lines per TV frame...Although the resolution of a frame is limited, the frame rate (30 frames per second in the NTSC system) is kept high to produce the visual effect that motions in the scene are smooth." 105. "The Frame Distributor... freezes frames of the combined video signal and displays them on respective monitors periodically." 106. FIG. 2, including Monitor Module and accompanying text.
8.5	simultaneously storing the displayed images using a second, predetermined frame rate and resolution associated with each image.	"The combined video signal can be recorded by a VCR for a backup purpose." 106. "Since it is just like an ordinary [video signal], a single VCR is sufficient for recording." 106. "There are some other hardware and software which... are worth mentioning here:...(3) optical disk recorder or high-capacity real-time magnetic disk memory for extra high-quality video recording system; (4) image data base and file management." 106.

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		"However, to produce a picture of the screen of a monitor without flicker, we need some kind of memory device to 'freeze' the picture until next refreshing frame with the same camera ID is available. The memory device used in the REMVISE system is generally called a frame grabber...The frame grabber can be controlled by a 'grab-enable' controlling signal, T, and pause the 'writing' or 'updating' of the frame memory until next grab-enable signal goes high, while the content of the frame memory is continuously 'read' out and fed into the monitor." 107. FIGS. 1-2, including VCR and accompanying text. FIG. 6 including accompanying text.
12.1	12. The method of simultaneously displaying and storing multiple video images, comprising the steps of:	"[T]he authors present a REMVISE system, which contains several TV cameras with well-planned scene division of the surveillance area so as to increase both the resolution and field of view. The video signals of the cameras are combined frame by frame so that only a single TV channel or cable is needed for transmission of multiple video signals. A frame distributing containing frame grabbers is used to reconstruct the multiple camera scenes on a bank of monitors." Abstract.
12.2	receiving video images from a plurality of sources;	"Containing a set of camera heads and lenses, the TV Camera Array is mounted on a pan-and-tilt drive... The video signals are combined frame by frame through the Frame Switcher. The output of the Frame Switcher is a combined video signal, which is transmitted to the Video Transmitter to the Central Monitor Station." 105-106. "As an example for illustration, suppose that there are six cameras (n=6)." 106. FIG. 1, including TV Camera Array and accompanying text.
12.3	digitizing one or more of the images if not already in digital form;	"The memory device used in the REMVISE system is generally called a frame grabber, which has been widely used for digital image processing on personal computers and work stations." 107. FIG. 4, A/D Converter and accompanying text.
12.4	displaying at least certain of the digitized images in separate windows on a display device, using a first set of temporal and spatial parameters associated with each image in each window;	"The video signals of the cameras are combined frame by frame so that only a single TV channel or cable is needed for transmission of multiple video signals. A frame distributing containing frame grabbers is used to reconstruct the multiple camera scenes on a bank of monitors." Abstract. "[T]he authors present a REMVISE system, which contains several TV cameras with well-planned scene division of the surveillance area so as to increase both the resolution and field of view." Abstract. "In a normal commercial TV system such as the NTSC standard, there are 525 scanning lines per TV frame...Although the resolution of a frame is limited, the frame rate (30 frames per second in the NTSC system) is kept high to produce the visual effect that motions in the scene are smooth." 105. "The Frame Distributor... freezes frames of the combined video signal and displays them on respective monitors periodically." 106.

#	USP 5,625,410	"A Remote Multi-Camera Visual Surveillance System Using Frame-Switching Technology" Publication Date: 10/5/1988
		FIG. 2, including Monitor Module and accompanying text.
12.5	simultaneously storing the displayed images using a second set of temporal and spatial parameters associated with each image.	"The combined video signal can be recorded by a VCR for a backup purpose." 106." "Since it is just like an ordinary [video signal], a single VCR is sufficient for recording." 106. "There are some other hardware and software which... are worth mentioning here:...(3) optical disk recorder or high-capacity real-time magnetic disk memory for extra high-quality video recording system; (4) image data base and file management." 106. "However, to produce a picture of the screen of a monitor without flicker, we need some kind of memory device to 'freeze' the picture until next refreshing frame with the same camera ID is available. The memory device used in the REMVISE system is generally called a frame grabber...The frame grabber can be controlled by a 'grab-enable' controlling signal, T, and pause the 'writing' or 'updating' of the frame memory until next grab-enable signal goes high, while the content of the frame memory is continuously 'read' out and fed into the monitor." 107. FIGS. 1-2, including VCR and accompanying text. FIG. 6 including accompanying text.
15.1	15. A video storage and display system, comprising:	"[T]he authors present a REMVISE system, which contains several TV cameras with well-planned scene division of the surveillance area so as to increase both the resolution and field of view. The video signals of the cameras are combined frame by frame so that only a single TV channel or cable is needed for transmission of multiple video signals. A frame distributing containing frame grabbers is used to reconstruct the multiple camera scenes on a bank of monitors." Abstract.
15.2	a plurality of video cameras, each outputting a signal representative of a video image;	"Containing a set of camera heads and lenses, the TV Camera Array is mounted on a pan-and-tilt drive... The video signals are combined frame by frame through the Frame Switcher. The output of the Frame Switcher is a combined video signal, which is transmitted to the Video Transmitter to the Central Monitor Station." 105-106. "As an example for illustration, suppose that there are six cameras (n=6)." 106. FIG. 1, including TV Camera Array and accompanying text.
15.3	means to receive the signals from each camera and digitally compress the images; and	Means to receive the signals from each camera and digitally compress the images is Frame Grabber and A/D Converter. "The memory device used in the REMVISE system is generally called a frame grabber, which has been widely used for digital image processing on personal computers and work stations." 107. FIG. 4, A/D Converter and accompanying text.
15.4	a computer configured to receive the digitally compressed images, the computer being interfaced to the following devices:	FIG. 2, including Video Receiver and accompanying text.
15.5	a display screen,	FIG. 2, including Monitor Module and accompanying text.
15.6	means to receive externally derived	Means to receive externally derived operator commands is Central

#	USP 5,625,410	"A Remote Multi-Camera Visual Surveillance System Using Frame-Switching Technology" Publication Date: 10/5/1988
	operator commands including means for sensing a deviation from the normal-state image scene associated with at least one of the video cameras, the existence of the deviation being used as the basis for generating an externally derived command, and	Monitor Station, System Controller, Command Transmitter and Operating Console. "The [Central Monitor Station] is positioned at a proper location, where operators and the chief event commander can scrutinize the live scenes in real time... and give suitable commands or orders for taking real actions." 106. "The System Controller accepts the remote commands from operating console containing joysticks and push buttons, encodes them, and then sends them to the Command Transmitter for transmission." 106. FIG. 2, including Operating Console, System Controller, Command Transmitter and accompanying text.
15.7	a high-capacity storage medium, and programmed to perform the following functions:	"The combined video signal can be recorded by a VCR for a backup purpose." 106." "Since it is just like an ordinary [video signal], a single VCR is sufficient for recording." 106. "There are some other hardware and software which... are worth mentioning here:...(3) optical disk recorder or high-capacity real-time magnetic disk memory for extra high-quality video recording system; (4) image data base and file management." 106. "However, to produce a picture of the screen of a monitor without flicker, we need some kind of memory device to 'freeze' the picture until next refreshing frame with the same camera ID is available. The memory device used in the REMVISE system is generally called a frame grabber...The frame grabber can be controlled by a 'grab-enable' controlling signal, T, and pause the 'writing' or 'updating' of the frame memory until next grab-enable signal goes high, while the content of the frame memory is continuously 'read' out and fed into the monitor." 107. FIGS. 1-2, including VCR and accompanying text. FIG. 6 including accompanying text.
15.8	display the digitally compressed images from the cameras in different windows on the display screen, each window being associated with an update rate and dimensions in pixels,	"The video signals of the cameras are combined frame by frame so that only a single TV channel or cable is needed for transmission of multiple video signals. A frame distributing containing frame grabbers is used to reconstruct the multiple camera scenes on a bank of monitors." Abstract. "[T]he authors present a REMVISE system, which contains several TV cameras with well-planned scene division of the surveillance area so as to increase both the resolution and field of view." Abstract. "In a normal commercial TV system such as the NTSC standard, there are 525 scanning lines per TV frame...Although the resolution of a frame is limited, the frame rate (30 frames per second in the NTSC system) is kept high to produce the visual effect that motions in the scene are smooth." 105. "The Frame Distributor... freezes frames of the combined video signal

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		and displays them on respective monitors periodically." 106. FIG. 2, including Monitor Module and accompanying text.
15.9	vary the dimensions and the rate at which a particular image is updated in its window in accordance with one of the externally derived commands,	"In a normal commercial TV system such as the NTSC standard, there are 525 scanning lines per TV frame...Although the resolution of a frame is limited, the frame rate (30 frames per second in the NTSC system) is kept high to produce the visual effect that motions in the scene are smooth." 105. "The Frame Distributor... freezes frames of the combined video signal and displays them on respective monitors periodically." 106. "The scene catched by each camera will be updated five times every second." 106. "The System Controller accepts the remote commands from operating console containing joysticks and push buttons, encodes them, and then sends them to the Command Transmitter for transmission." 106. The frame grabber can be controlled by a 'grab-enable' controlling signal, T, and pause the 'writing' or 'updating' of the frame memory until next grab-enable signal goes high, while the content of the frame memory is continuously 'read' out and fed into the monitor." 107. FIG. 2, including Monitor Module and accompanying text. FIG. 2, including Operating Console, System Controller, Command Transmitter and accompanying text.
15.10	store the digitally compressed images in the high-capacity storage medium, and	"The combined video signal can be recorded by a VCR for a backup purpose." 106." "There are some other hardware and software which... are worth mentioning here:...(3) optical disk recorder or high-capacity real-time magnetic disk memory for extra high-quality video recording system; (4) image data base and file management." 106. "However, to produce a picture of the screen of a monitor without flicker, we need some kind of memory device to 'freeze' the picture until next refreshing frame with the same camera ID is available. The memory device used in the REMVISE system is generally called a frame grabber...The frame grabber can be controlled by a 'grab-enable' controlling signal, T, and pause the 'writing' or 'updating' of the frame memory until next grab-enable signal goes high, while the content of the frame memory is continuously 'read' out and fed into the monitor." 107. FIGS. 1-2, including VCR and accompanying text. FIG. 6 including accompanying text.
15.11	vary the dimensions and the rate at which a particular image is stored in accordance with one of the externally derived commands.	"The combined video signal can be recorded by a VCR for a backup purpose." 106." "There are some other hardware and software which... are worth mentioning here:...(3) optical disk recorder or high-capacity real-time magnetic disk memory for extra high-quality video recording system; (4) image data base and file management." 106.

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		"The System Controller accepts the remote commands from operating console containing joysticks and push buttons, encodes them, and then sends them to the Command Transmitter for transmission." 106. "However, to produce a picture of the screen of a monitor without flicker, we need some kind of memory device to 'freeze' the picture until next refreshing frame with the same camera ID is available. The memory device used in the REMVISE system is generally called a frame grabber...The frame grabber can be controlled by a 'grab-enable' controlling signal, T, and pause the 'writing' or 'updating' of the frame memory until next grab-enable signal goes high, while the content of the frame memory is continuously 'read' out and fed into the monitor." 107. FIGS. 1, including VCR and accompanying text. FIG. 2, including VCR, Operating Console, System Controller, Command Transmitter and accompanying text. FIG. 6 including accompanying text.

EXHIBIT 13

#	USP 5,625,410	U.S. Patent No. 4,511,886 Filing date: 10/06/1983 Issue date: 4/16/1986
	Asserted claims	**Rodriguez**
8.1	8. The method of simultaneously displaying and storing multiple video images, comprising the steps of:	"A security and surveillance system having a central monitoring station connected to a plurality of remote installations or subscribers by a transmission medium having a finite bandwidth. Each remote installation includes a plurality of surveillance equipment, including video, audio, and alarm signals, associated with a plurality of monitored locations." Abstract. "With reference to FIG. 2, the digital communicator 156 receives the alarm signal on bus 110 from switcher 100, starts the on-site recorder 120 by a command on line 122, instructs the video compressor 140 to switch to its faster, slow scan by a command on line 157, and provides the identification of the location alarm condition by an alarm code on line 146." 7: 10-16. "The digital bits are then stored in a 197 k-byte memory and read out of that memory at a much lower rate. For a slow, slow scan rate, the memory is read at a 31.5 khz rate, and the video picture at the central station is refreshed every 4 seconds. For a faster, slow scan rate, the memory is read at a 350 khz rate, and the video picture is refreshed every 0.2 seconds. The slower, slow scan rate (4 sec. refresh) is used during normal monitoring and the faster, slow scan rate (0.2 sec. refresh) is used during an alarm condition." 5:53-62. FIG. 1 including accompanying text. FIG. 2 including accompanying text.
8.2	receiving video images from a plurality of sources;	Abstract: "A security and surveillance system having a central monitoring station connected to a plurality of remote installations or subscribers by a transmission medium having a finite bandwidth. Each remote installation includes a plurality of surveillance equipment, including video, audio, and alarm signals, associated with a plurality of monitored locations." "The cameras 12, 14, 16, and 18 produce a typical video signal on lines 34, 36, 38 and 40." 3: 48-49. FIG. 1, including Cameras 12, 14, 16, and 18 and accompanying text.
8.3	digitizing one or more of the images if not already in digital form;	"The video compressor 140 converts the real time video signal into digital form by sampling and quantizing the video signal into six digital bits at a rate of 9 mhz. The digital bits are then stored in a 197 k-byte memory and read out of that memory at a much lower rate." 5: 50-53. "Video compressor 140 shown in FIG. 4 accomplishes the required video signal compression." 7: 29-30. "The video compressor 140 selects the slow, slow scan rate or the fast slow scan rate by means of an alarm condition signal on line 157 from the digital communicator 156 when there is an alarm condition." 7: 48-51. "The A/D converter 422 quantizes the video signal into 6 digital bits which are stored in memory 141." 7: 56-58.

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		FIG. 2, including Video Compressor 140 and accompanying text. FIG. 4, including A/D Converter 422 and accompanying text.
8.4	displaying at least certain of the digitized images in separate windows on a display device, using a first, predetermined frame rate and resolution associated with each window; and	"...and line 104 being the video output which is continuously displayed on monitor 105. The switcher 100 is constructed so that its dwell time on any given pair of audio and video signals can be adjusted to insure that more critical locations can be scrutinized more carefully by a camera and a microphone (e.g. the cash register)." 4:19-23. "As long as no alarm condition exists, the switcher 100 continuously and sequentially samples each pair of audio and video signals at inputs 99 and connects those signals sequentially to its normal audio and video output lines 102 and 104." 4:24-27. "As long as the alarm condition exists, the audio and video signals from the alarm location will be continuously connected to bridging terminals 106 and 108." 4:48-51. "The digital bits are then stored in a 197 k-byte memory and read out of that memory at a much lower rate. For a slow, slow scan rate, the memory is read at a 31.5 khz rate, and the video picture at the central station is refreshed every 4 seconds. For a faster, slow scan rate, the memory is read at a 350 khz rate, and the video picture is refreshed every 0.2 seconds. The slower, slow scan rate (4 sec. refresh) is used during normal monitoring and the faster, slow scan rate (0.2 sec. refresh) is used during an alarm condition." 5:53-62. "The master clock 412 also controls the memory read out rate which is preferably 31.5 khz for a slower slow scan rate with a video picture at the central station refreshed at every 4 seconds or 350 khz for a faster slow scan rate where the video picture at the central station is refreshed at every 0.2 seconds. The video compressor 140 selects the slow, slow scan rate or the fast slow scan rate by means of an alarm condition signal on line 157 from the digital communicator 156 when there is an alarm condition." 7: 43-52. "Returning to Fig. 5... the expanded video output on line 662 is connected to monitor 680 which continuously displays the video information being received from the remote installation being monitored by interface unit receiver 601." 13: 52-57. "On command of microprocessor 684 and command computer 692, the master switcher can select a pair of particular audio and video signals from a particular interface unit receiver to be displayed on the auxiliary monitor 686 and to be sent via microwave link 688 to remote monitor 690 which may be at a police station or other facility from which aid can be provided. The command computer 692 and the microprocessor 684 continuously monitors bus 666 for an alarm code from any interface unit receiver." 14: 1-10. FIG. 1, including Monitor 105 and Video Compressor 140 and accompanying text.

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		FIG. 4, including Master Clock 412 and accompanying text. FIG. 5, including Monitor 680, Aux. Monitor 686, Remote Monitor 690 and accompanying text.
8.5	simultaneously storing the displayed images using a second, predetermined frame rate and resolution associated with each image.	"At the occurrence of an alarm condition, the interface unit transmitter 112 also starts on-site recorder 120 by means of a command signal on line 122 and feeds the slow scan video signal and audio signal for the alarm condition location to the on-site recorder 120 via lines 142 and 130 respectively to assure security information is not lost because of a transmission medium failure (e.g., a cut cable) between the remote facility and the central station." 4: 57-65. "The digital bits are then stored in a 197 k-byte memory (141, FIG. 4) and read out of that memory at a much lower rate." 5: 53-55. "With reference to FIG. 2, the digital communicator 156 receives the alarm signal on bus 110 from switcher 100, starts the on-site recorder 120 by a command on line 122, instructs the video compressor 140 to switch to its faster, slow scan by a command on line 157, and provides the identification of the location alarm condition by an alarm code on line 146." 7: 10-16. "The A/D converter 422 quantizes the video signal into 6 digital bits which are stored in memory 141. Memory 141 comprises a 197 k-byte memory which is sequentially addressed by counter 426." 7: 56-60. FIG. 1, including Recorder 120 and accompanying text. FIG. 4, including Memory Board 141 and accompanying text.
12.1	12. The method of simultaneously displaying and storing multiple video images, comprising the steps of:	"A security and surveillance system having a central monitoring station connected to a plurality of remote installations or subscribers by a transmission medium having a finite bandwidth. Each remote installation includes a plurality of surveillance equipment, including video, audio, and alarm signals, associated with a plurality of monitored locations." Abstract. "With reference to FIG. 2, the digital communicator 156 receives the alarm signal on bus 110 from switcher 100, starts the on-site recorder 120 by a command on line 122, instructs the video compressor 140 to switch to its faster, slow scan by a command on line 157, and provides the identification of the location alarm condition by an alarm code on line 146." 7: 10-16. "The digital bits are then stored in a 197 k-byte memory and read out of that memory at a much lower rate. For a slow, slow scan rate, the memory is read at a 31.5 khz rate, and the video picture at the central station is refreshed every 4 seconds. For a faster, slow scan rate, the memory is read at a 350 khz rate, and the video picture is refreshed every 0.2 seconds. The slower, slow scan rate (4 sec. refresh) is used during normal monitoring and the faster, slow scan rate (0.2 sec. refresh) is used during an alarm condition." 5:53-62. FIG. 1 including accompanying text. FIG. 2 including accompanying text.
12.2	receiving video images from a plurality of	

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	sources;	Abstract: "A security and surveillance system having a central monitoring station connected to a plurality of remote installations or subscribers by a transmission medium having a finite bandwidth. Each remote installation includes a plurality of surveillance equipment, including video, audio, and alarm signals, associated with a plurality of monitored locations." "The cameras 12, 14, 16, and 18 produce a typical video signal on lines 34, 36, 38 and 40." 3: 48-49. FIG. 1, including Cameras 12, 14, 16, and 18 and accompanying text.
12.3	digitizing one or more of the images if not already in digital form;	"The video compressor converts the real time video signal into digital form by sampling and quantizing the video signal into six digital bits at a rate of 9 mhz. The digital bits are then stored in a 197 k-byte memory and read out of that memory at a much lower rate." 5: 50-53. "Video compressor 140 shown in FIG. 4 accomplishes the required video signal compression." 7: 29-30. "The video compressor 140 selects the slow, slow scan rate or the fast slow scan rate by means of an alarm condition signal on line 157 from the digital communicator 156 when there is an alarm condition." 7: 48-51. "The A/D converter 422 quantizes the video signal into 6 digital bits which are stored in memory 141." 7: 56-58. FIG. 2, including Video Compressor 140 and accompanying text. FIG. 4, including A/D Converter 422 and accompanying text.
12.4	displaying at least certain of the digitized images in separate windows on a display device, using a first set of temporal and spatial parameters associated with each image in each window;	"...and line 104 being the video output which is continuously displayed on monitor 105. The switcher 100 is constructed so that its dwell time on any given pair of audio and video signals can be adjusted to insure that more critical locations can be scrutinized more carefully by a camera and a microphone (e.g. the cash register)." 4:19-23. "As long as no alarm condition exists, the switcher 100 continuously and sequentially samples each pair of audio and video signals at inputs 99 and connects those signals sequentially to its normal audio and video output lines 102 and 104." 4:24-27. "As long as the alarm condition exists, the audio and video signals from the alarm location will be continuously connected to bridging terminals 106 and 108." 4:48-51. "The digital bits are then stored in a 197 k-byte memory and read out of that memory at a much lower rate. For a slow, slow scan rate, the memory is read at a 31.5 khz rate, and the video picture at the central station is refreshed every 4 seconds. For a faster, slow scan rate, the memory is read at a 350 khz rate, and the video picture is refreshed every 0.2 seconds. The slower, slow scan rate (4 sec. refresh) is used during normal monitoring and the faster, slow scan rate (0.2 sec. refresh) is used during an alarm condition." 5:53-62.

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		"The master clock 412 also controls the memory read out rate which is preferably 31.5 khz for a slower slow scan rate with a video picture at the central station refreshed at every 4 seconds or 350 khz for a faster slow scan rate where the video picture at the central station is refreshed at every 0.2 seconds. The video compressor 140 selects the slow, slow scan rate or the fast slow scan rate by means of an alarm condition signal on line 157 from the digital communicator 156 when there is an alarm condition." 7: 43-52. "Returning to Fig. 5... the expanded video output on line 662 is connected to monitor 680 which continuously displays the video information being received from the remote installation being monitored by interface unit receiver 601." 13: 52-57. "On command of microprocessor 684 and command computer 692, the master switcher can select a pair of particular audio and video signals from a particular interface unit receiver to be displayed on the auxiliary monitor 686 and to be sent via microwave link 688 to remote monitor 690 which may be at a police station or other facility from which aid can be provided. The command computer 692 and the microprocessor 684 continuously monitors bus 666 for an alarm code from any interface unit receiver." 14: 1-10. FIG. 1, including Monitor 105 and Video Compressor 140 and accompanying text. FIG. 4, including Master Clock 412 and accompanying text. FIG. 5, including Monitor 680, Aux. Monitor 686, Remote Monitor 690 and accompanying text.
12.5	simultaneously storing the displayed images using a second set of temporal and spatial parameters associated with each image.	"At the occurrence of an alarm condition, the interface unit transmitter 112 also starts on-site recorder 120 by means of a command signal on line 122 and feeds the slow scan video signal and audio signal for the alarm condition location to the on-site recorder 120 via lines 142 and 130 respectively to assure security information is not lost because of a transmission medium failure (e.g., a cut cable) between the remote facility and the central station." 4: 57-65. "The digital bits are then stored in a 197 k-byte memory (141, FIG. 4) and read out of that memory at a much lower rate." 5: 53-55. "The A/D converter 422 quantizes the video signal into 6 digital bits which are stored in memory 141. Memory 141 comprises a 197 k-byte memory which is sequentially addressed by counter 426." 7: 56-60. FIG. 1, including Recorder 120 and accompanying text. FIG. 4, including Memory Board 141 and accompanying text.
15.1	15. A video storage and display system, comprising:	"A security and surveillance system having a central monitoring station connected to a plurality of remote installations or subscribers by a transmission medium having a finite bandwidth. Each remote installation includes a plurality of surveillance equipment, including video, audio, and alarm signals, associated with a plurality of monitored locations." Abstract.

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		"With reference to FIG. 2, the digital communicator 156 receives the alarm signal on bus 110 from switcher 100, starts the on-site recorder 120 by a command on line 122, instructs the video compressor 140 to switch to its faster, slow scan by a command on line 157, and provides the identification of the location alarm condition by an alarm code on line 146." 7: 10-16. "The digital bits are then stored in a 197 k-byte memory and read out of that memory at a much lower rate. For a slow, slow scan rate, the memory is read at a 31.5 khz rate, and the video picture at the central station is refreshed every 4 seconds. For a faster, slow scan rate, the memory is read at a 350 khz rate, and the video picture is refreshed every 0.2 seconds. The slower, slow scan rate (4 sec. refresh) is used during normal monitoring and the faster, slow scan rate (0.2 sec. refresh) is used during an alarm condition." 5:53-62. FIG. 1 including accompanying text. FIG. 2 including accompanying text.
15.2	a plurality of video cameras, each outputting a signal representative of a video image;	"The cameras 12, 14, 16, and 18 produce a typical video signal on lines 34, 36, 38, and 40." 3: 48-49. FIG. 1, including Cameras 12, 14, 16, 18 and accompanying text.
15.3	means to receive the signals from each camera and digitally compress the images; and	Means to receive the signals from each camera and digitally compress the images is Interface Unit Transmitter 112, Video Compressor 140, and A/D Converter 422. "The interface unit transmitter compresses the video information and . . . then using a key frequency and single side band modulation techniques modulates and sub-channelizes the processed security information into a frequency spectrum. The sub-channelized security information is translated in frequency and transmitted on the transmission medium." Abstract. "The video compressor converts the real time video signal into digital form by sampling and quantizing the video signal into six digital bits at a rate of 9 mhz. The digital bits are then stored in a 197 k-byte memory and read out of that memory at a much lower rate." 5: 50-53. "Video compressor 140 shown in FIG. 4 accomplishes the required video signal compression." 7: 29-30. "The video compressor 140 selects the slow, slow scan rate or the fast slow scan rate by means of an alarm condition signal on line 157 from the digital communicator 156 when there is an alarm condition." 7: 48-51. "The A/D converter 422 quantizes the video signal into 6 digital bits which are stored in memory 141." 7: 56-58. FIG. 1, including Interface Unit Transmitter 112 and accompanying text. FIG. 2, including Video Compressor 140 and accompanying text. FIG. 4, including A/D Converter 422 and accompanying text.
15.4	a computer configured to receive the	"The interface unit transmitter compresses the video information."

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	digitally compressed images, the computer being interfaced to the following devices:	Abstract. "Also during an alarm condition, the bridged video output signal on line 108 is fed to a date/time generator 114 which superimposes the date and time onto the video signal before the video signal is connected to the input 116 of the interface unit transmitter 112." 4: 52-56. "...the terminology "transmitter" has been adopted to reflect the primary function of interface unit transmitter 112 in transmitting processed security information downstream to the central station." 5: 20-23. "On command of microprocessor 684 and command computer 692, the master switcher can select a pair of particular audio and video signals from a particular interface unit receiver to be displayed on the auxiliary monitor 686 and to be sent via microwave link 688 to remote monitor 690 which may be at a police station or other facility from which aid can be provided. The command computer 692 and the microprocessor 684 continuously monitors bus 666 for an alarm code from any interface unit receiver." 14: 1-10. FIG. 1, including Interface Unit Transmitter 112 and accompanying text. FIG. 5, including Command Computer 692, Microprocessor 684 and accompanying text.
15.5	a display screen,	FIG. 1, including Monitor 105 and accompanying text. FIG. 5, including Monitor 680, Remote Monitor 690, Aux Monitor 686 and accompanying text.
15.6	means to receive externally derived operator commands including means for sensing a deviation from the normal-state image scene associated with at least one of the video cameras, the existence of the deviation being used as the basis for generating an externally derived command, and	Means to receive externally derived operator commands is Command Computer 692, Switcher 100, and Master Switcher 682. Means for sensing a deviation from the normal-state image scene associated with at least one of the video cameras is Motion Detectors 56, 58, 60 and 62, Alarm Sensors 28, 30 and 32, and Interface Unit Transmitter 112. "Alarm signals are produced by motion detectors 56, 58, 60, and 62, which motion detectors monitor the video signals on lines 34, 36, 38 and 40 respectively and determine when those video signals experience a change thereby indicating that something has moved in front of the camera...These motion detectors may be switched on or off depending upon whether the scene to be monitored is active or passive." 3: 61 – 4: 2. "The alarm sensors 28, 30 and 32 produce alarm signals on lines 50, 52 and 54 in response to alarm conditions such as smoke, fire, the motion of an intruder, or the weight of an intruder." 4: 7-10. "When operating as a receiver, interface unit transmitter 112 in FIG. 2 receives upstream command signals from the central station through directional coupler 172 and line 168." 6: 42-45. "The absence of an alarm, the computer can, at the operator's option, order display of a particular on-site location on the auxillary monitor by means of an upstream command to switcher 100 (FIG. 1) and a

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		command to master switcher 682." 14: 22-26. FIG. 1, including Motion Detectors 56, 58, 60 and 62, Alarm Sensors 28, 30 and 32, Switcher 100, Interface Unit Transmitter 112 and accompanying text. FIG. 5, including Command Computer 692, Master Switcher 682 and accompanying text.
15.7	a high-capacity storage medium, and programmed to perform the following functions:	"At the occurrence of an alarm condition, the interface unit transmitter 112 also starts on-site recorder 120 by means of a command signal on line 122 and feeds the slow scan video signal and audio signal for the alarm condition location to the on-site recorder 120 via lines 142 and 130 respectively to assure security information is not lost because of a transmission medium failure (e.g., a cut cable) between the remote facility and the central station." 4: 57-65. "The digital bits are then stored in a 197 k-byte memory (141, FIG. 4) and read out of that memory at a much lower rate." 5: 53-55. FIG. 1, including Recorder 120 and accompanying text. FIG. 4, including Memory Board 141 and accompanying text.
15.8	display the digitally compressed images from the cameras in different windows on the display screen, each window being associated with an update rate and dimensions in pixels,	"...and line 104 being the video output which is continuously displayed on monitor 105. The switcher 100 is constructed so that its dwell time on any given pair of audio and video signals can be adjusted to insure that more critical locations can be scrutinized more carefully by a camera and a microphone (e.g. the cash register)." 4:19-23. "The digital bits are then stored in a 197 k-byte memory and read out of that memory at a much lower rate. For a slow, slow scan rate, the memory is read at a 31.5 khz rate, and the video picture at the central station is refreshed every 4 seconds. For a faster, slow scan rate, the memory is read at a 350 khz rate, and the video picture is refreshed every 0.2 seconds. The slower, slow scan rate (4 sec. refresh) is used during normal monitoring and the faster, slow scan rate (0.2 sec. refresh) is used during an alarm condition." 5:53-62. "The master clock 412 also controls the memory read out rate which is preferably 31.5 khz for a slower slow scan rate with a video picture at the central station refreshed at every 4 seconds or 350 khz for a faster slow scan rate where the video picture at the central station is refreshed at every 0.2 seconds. The video compressor 140 selects the slow, slow scan rate or the fast slow scan rate by means of an alarm condition signal on line 157 from the digital communicator 156 when there is an alarm condition." 7: 43-52. "Returning to Fig. 5... the expanded video output on line 662 is connected to monitor 680 which continuously displays the video information being received from the remote installation being monitored by interface unit receiver 601." 13: 52-57. "On command of microprocessor 684 and command computer 692, the master switcher can select a pair of particular audio and video signals from a particular interface unit receiver to be displayed on the auxiliary monitor 686 and to be sent via microwave link 688 to remote monitor

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		690 which may be at a police station or other facility from which aid can be provided. The command computer 692 and the microprocessor 684 continuously monitors bus 666 for an alarm code from any interface unit receiver." 14: 1-10. FIG. 1, including Monitor 105 and Video Compressor 140 and accompanying text. FIG. 4, including Master Clock 412 and accompanying text. FIG. 5, including Monitor 680, Aux. Monitor 686, Remote Monitor 690 and accompanying text.
15.9	vary the dimensions and the rate at which a particular image is updated in its window in accordance with one of the externally derived commands,	"As long as the alarm condition exists, the audio and video signals from the alarm location will be continuously connected to bridging terminals 106 and 108." 4:48-51. "The video compressor converts the real time video signal into digital form by sampling and quantizing the video signal into six digital bits at a rate of 9 mhz. The digital bits are then stored in a 197 k-byte memory and read out of that memory at a much lower rate. For a slow, slow scan rate, the memory is read at a 31.5 khz rate, and the video picture at the central station is refreshed every 4 seconds. For a faster, slow scan rate, the memory is read at a 350 khz rate, and the video picture is refreshed every 0.2 seconds. The slower, slow scan rate (4 sec. refresh) is used during normal monitoring and the faster, slow scan rate (0.2 sec. refresh) is used during an alarm condition." 5:50-62. "The master clock 412 also controls the memory read out rate which is preferably 31.5 khz for a slower slow scan rate with a video picture at the central station refreshed at every 4 seconds or 350 khz for a faster slow scan rate where the video picture at the central station is refreshed at every 0.2 seconds. The video compressor 140 selects the slow, slow scan rate or the fast slow scan rate by means of an alarm condition signal on line 157 from the digital communicator 156 when there is an alarm condition." 7: 43-52. "The absence of an alarm, the computer can, at the operator's option, order display of a particular on-site location on the auxillary monitor by means of an upstream command to switcher 100 (FIG. 1) and a command to master switcher 682." 14: 22-26. FIG. 1, including Monitor 105 and Video Compressor 140 and accompanying text. FIG. 4, including Master Clock 412 and accompanying text.
15.10	store the digitally compressed images in the high-capacity storage medium, and	"At the occurrence of an alarm condition, the interface unit transmitter 112 also starts on-site recorder 120 by means of a command signal on line 122 and feeds the slow scan video signal and audio signal for the alarm condition location to the on-site recorder 120 via lines 142 and 130 respectively to assure security information is not lost because of a transmission medium failure (e.g., a cut cable) between the remote facility and the central station." 4: 57-65. "The digital bits are then stored in a 197 k-byte memory (141, FIG. 4) and read out of that memory at a much lower rate." 5: 53-55.

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		"The A/D converter 422 quantizes the video signal into 6 digital bits which are stored in memory 141. Memory 141 comprises a 197 k-byte memory which is sequentially addressed by counter 426." 7: 56-60. FIG. 1, including Recorder 120 and accompanying text. FIG. 4, including Memory Board 141 and accompanying text.
15.11	vary the dimensions and the rate at which a particular image is stored in accordance with one of the externally derived commands.	"At the occurrence of an alarm condition, the interface unit transmitter 112 also starts on-site recorder 120 by means of a command signal on line 122 and feeds the slow scan video signal and audio signal for the alarm condition location to the on-site recorder 120 via lines 142 and 130 respectively to assure security information is not lost because of a transmission medium failure (e.g., a cut cable) between the remote facility and the central station." 4: 57-65. "The digital bits are then stored in a 197 k-byte memory (141, FIG. 4) and read out of that memory at a much lower rate." 5: 53-55. "The A/D converter 422 quantizes the video signal into 6 digital bits which are stored in memory 141. Memory 141 comprises a 197 k-byte memory which is sequentially addressed by counter 426." 7: 56-60. FIG. 1, including Recorder 120 and accompanying text. FIG. 4, including Memory Board 141 and accompanying text.

EXHIBIT 14

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	Asserted claims	**Tagawa**
8.1	8. The method of simultaneously displaying and storing multiple video images, comprising the steps of:	"A surveillance system having self-test functions having an image pick-up sensor, an image processing unit connected to the image pick-up sensor for detecting a sense change of video signals obtained from the image pick-up sensor, an alarm generator connected to the image processing unit for generating alarm signals based on the detection of the scene change." Abstract. "The video memory 44 comprises storage with a capacity e.g. of 4 field memories." 4: 60-61. "The video signal and audio signal respectively outputted from the amplifiers 19 and 22 are also supplied to a monitoring apparatus 6." 3: 15-18.
8.2	receiving video images from a plurality of sources;	"Therefore, the switching circuit 11 is parallely supplied with the video signals respectively delivered from 8 TV cameras, 1 placed at different locations." 2: 26-29.
8.3	digitizing one or more of the images if not already in digital form;	"The video signal from each of the 8 TV cameras is supplied through an adder circuit 23 to a digitizer circuit 31 and a synchronizing signal separating circuit 32 in an image processing circuit 30. A digital output signal produced by the digitizer circuit 31 is supplied to a switching circuit 33." 3: 35-40. "...and the signal from the corresponding channel is converted into a digital signal by an A/D converter 43, and then signals corresponding to one field of the converted signal are written into a video memory 44, under the control of the memory control circuit 42." 4: 50-55. FIG. 1, including Digitize Circuit 8 and A/D 43 and accompanying text.
8.4	displaying at least certain of the digitized images in separate windows on a display device, using a first, predetermined frame rate and resolution associated with each window; and	"The video signal and audio signal respectively outputted from the amplifiers 19 and 22 are also supplied to a monitoring apparatus 6." 3: 15-18. "When the switches 17 and 21 are respectively connected to their terminals A, an image by the video signal is displayed on the screen of the monitoring apparatus 6." 3: 24-27. "Then, the monitoring apparatus 6 displays on its screen an image reproduced from the image signal supplied from the corresponding channel." 4: 41-43. FIG. 1, including Monitor 6 and accompanying text.
8.5	simultaneously storing the displayed images using a second, predetermined frame rate and resolution associated with each image.	"...and the signal from the corresponding channel is converted into a digital signal by an A/D converter 43, and then signals corresponding to one field of the converted signal are written into a video memory 44, under the control of the memory control circuit 42." 4: 50-55. "The video memory 44 comprises storage with a capacity e.g. of 4 field memories." 4: 60-61.

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		"Reference data corresponding to the video signal when no change is detected in a scene, is previously stored in the RAM 38." 4: 15-17. FIG. 1, including Video Memory 44, Memory Control 42 and RAM 38 and accompanying text.
12.1	12. The method of simultaneously displaying and storing multiple video images, comprising the steps of:	"A surveillance system having self-test functions having an image pick-up sensor, an image processing unit connected to the image pick-up sensor for detecting a sense change of video signals obtained from the image pick-up sensor, an alarm generator connected to the image processing unit for generating alarm signals based on the detection of the scene change." Abstract. "The video memory 44 comprises storage with a capacity e.g. of 4 field memories." 4: 60-61. "The video signal and audio signal respectively outputted from the amplifiers 19 and 22 are also supplied to a monitoring apparatus 6." 3: 15-18.
12.2	receiving video images from a plurality of sources;	"Therefore, the switching circuit 11 is parallely supplied with the video signals respectively delivered from 8 TV cameras, 1 placed at different locations." 2: 26-29.
12.3	digitizing one or more of the images if not already in digital form;	"The video signal from each of the 8 TV cameras is supplied through an adder circuit 23 to a digitizer circuit 31 and a synchronizing signal separating circuit 32 in an image processing circuit 30. A digital output signal produced by the digitizer circuit 31 is supplied to a switching circuit 33." 3: 35-40. "...and the signal from the corresponding channel is converted into a digital signal by an A/D converter 43, and then signals corresponding to one field of the converted signal are written into a video memory 44, under the control of the memory control circuit 42." 4: 50-55. FIG. 1, including Digitize Circuit 8 and A/D 43 and accompanying text.
12.4	displaying at least certain of the digitized images in separate windows on a display device, using a first set of temporal and spatial parameters associated with each image in each window;	"The video signal and audio signal respectively outputted from the amplifiers 19 and 22 are also supplied to a monitoring apparatus 6." 3: 15-18. "When the switches 17 and 21 are respectively connected to their terminals A, an image by the video signal is displayed on the screen of the monitoring apparatus 6." 3: 24-27. "Then, the monitoring apparatus 6 displays on its screen an image reproduced from the image signal supplied from the corresponding channel." 4: 41-43. FIG. 1, including Monitor 6 and accompanying text.
12.5	simultaneously storing the displayed images using a second set of temporal and spatial parameters associated with each image.	"...and the signal from the corresponding channel is converted into a digital signal by an A/D converter 43, and then signals corresponding to one field of the converted signal are written into a video memory 44, under the control of the memory control circuit 42." 4: 50-55. "The video memory 44 comprises storage with a capacity e.g. of 4 field

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		memories." 4: 60-61. "Reference data corresponding to the video signal when no change is detected in a scene, is previously stored in the RAM 38." 4: 15-17. FIG. 1, including Video Memory 44, Memory Control 42 and RAM 38 and accompanying text.
15.1	15. A video storage and display system, comprising:	"A surveillance system having self-test functions having an image pick-up sensor, an image processing unit connected to the image pick-up sensor for detecting a sense change of video signals obtained from the image pick-up sensor, an alarm generator connected to the image processing unit for generating alarm signals based on the detection of the scene change." Abstract. "The video memory 44 comprises storage with a capacity e.g. of 4 field memories." 4: 60-61. "The video signal and audio signal respectively outputted from the amplifiers 19 and 22 are also supplied to a monitoring apparatus 6." 3: 15-18.
15.2	a plurality of video cameras, each outputting a signal representative of a video image;	"Therefore, the switching circuit 11 is parallely supplied with the video signals respectively delivered from 8 TV cameras, 1 placed at different locations." 2: 26-29.
15.3	means to receive the signals from each camera and digitally compress the images; and	Means to receive the signals from each camera and digitally compress the images is Adder Circuit 23, Digitizer Circuit 31, A/D 43, Synchronizing Signal Separating Circuit 32, and Image Processing Circuit 30. "The video signal from each of the 8 TV cameras is supplied through an adder circuit 23 to a digitizer circuit 31 and a synchronizing signal separating circuit 32 in an image processing circuit 30. A digital output signal produced by the digitizer circuit 31 is supplied to a switching circuit 33." 3: 35-40. "...and the signal from the corresponding channel is converted into a digital signal by an A/D converter 43, and then signals corresponding to one field of the converted signal are written into a video memory 44, under the control of the memory control circuit 42." 4: 50-55. FIG. 1, including Digitizer Circuit 8 and A/D 43 and accompanying text.
15.4	a computer configured to receive the digitally compressed images, the computer being interfaced to the following devices:	FIG. 1, including CPU 13, CPU 41 and CPU 35 and accompanying text.
15.5	a display screen,	FIG. 1, including Monitor 6 and accompanying text.
15.6	means to receive externally derived operator commands including means for sensing a deviation from the normal-state image scene associated with at least one of the video cameras, the existence of the deviation being used as the basis for generating an externally derived command, and	Means to receive externally derived operator commands is control panel 5. Means for sensing a deviation from the normal-state image scene associated with at least one of the video cameras is CPU 35 and RAM 38.

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		"A surveillance system having self-test functions having an image pick-up sensor, an image processing unit connected to the image pick-up sensor for detecting a sense change of video signals obtained from the image pick-up sensor, an alarm generator connected to the image processing unit for generating alarm signals based on the detection of the scene change." Abstract. "A change-over of the switching circuits 11 and 12 is controlled by the CPU 13 according to the user's operation of a control panel 5. FIG. 2 shows the control panel 5. If one of a set of channel selecting switches 71-78 on the control panel is selectively pressed, the switching circuits 11 and 12 are manually changed over to a selected channel." 2: 35-41. "The CPU 35 compares, for each of the sensing channels, the reference data with current data which is sequentially written into the RAM 38 afterward. If a change of more than a predetermined amount is detected, e.g. a 4-bit scene change alarm output signal is delivered from the CPU 35." 4: 22-25. FIG. 1, including CPU 13 and CPU 35 and accompanying text.
15.7	a high-capacity storage medium, and programmed to perform the following functions:	"...and the signal from the corresponding channel is converted into a digital signal by an A/D converter 43, and then signals corresponding to one field of the converted signal are written into a video memory 44, under the control of the memory control circuit 42." 4: 50-55. "The video memory 44 comprises storage with a capacity e.g. of 4 field memories." 4: 60-61. "Reference data corresponding to the video signal when no change is detected in a scene, is previously stored in the RAM 38." 4: 15-17. FIG. 1, including Video Memory 44, Memory Control 42 and RAM 38
15.8	display the digitally compressed images from the cameras in different windows on the display screen, each window being associated with an update rate and dimensions in pixels,	"The video signal and audio signal respectively outputted from the amplifiers 19 and 22 are also supplied to a monitoring apparatus 6." 3: 15-18. "When the switches 17 and 21 are respectively connected to their terminals A, an image by the video signal is displayed on the screen of the monitoring apparatus 6." 3: 24-27. "Then, the monitoring apparatus 6 displays on its screen an image reproduced from the image signal supplied from the corresponding channel." 4: 41-43. FIG. 1, including Monitor 6 and accompanying text.
15.9	vary the dimensions and the rate at which a particular image is updated in its window in accordance with one of the externally derived commands,	"A change-over of the switching circuits 11 and 12 is controlled by the CPU 13 according to the user's operation of a control panel 5. FIG. 2 shows the control panel 5. If one of a set of channel selecting switches 71-78 on the control panel is selectively pressed, the switching circuits 11 and 12 are manually changed over to a selected channel." 2: 35-41. To the extent the reference does not explicitly disclose varying the dimensions and the rate at which a particular image is updated in its

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		window, this limitation is inherent in this disclosure.
15.10	store the digitally compressed images in the high-capacity storage medium, and	"...and the signal from the corresponding channel is converted into a digital signal by an A/D converter 43, and then signals corresponding to one field of the converted signal are written into a video memory 44, under the control of the memory control circuit 42." 4: 50-55. "The video memory 44 comprises storage with a capacity e.g. of 4 field memories." 4: 60-61. "Reference data corresponding to the video signal when no change is detected in a scene, is previously stored in the RAM 38." 4: 15-17. FIG. 1, including Video Memory 44, Memory Control 42 and RAM 38 and accompanying text.
15.11	vary the dimensions and the rate at which a particular image is stored in accordance with one of the externally derived commands.	"...and the signal from the corresponding channel is converted into a digital signal by an A/D converter 43, and then signals corresponding to one field of the converted signal are written into a video memory 44, under the control of the memory control circuit 42." 4: 50-55. "The video memory 44 comprises storage with a capacity e.g. of 4 field memories." 4: 60-61. "Reference data corresponding to the video signal when no change is detected in a scene, is previously stored in the RAM 38." 4: 15-17. "A change-over of the switching circuits 11 and 12 is controlled by the CPU 13 according to the user's operation of a control panel 5. FIG. 2 shows the control panel 5. If one of a set of channel selecting switches 71-78 on the control panel is selectively pressed, the switching circuits 11 and 12 are manually changed over to a selected channel." 2: 35-41. FIG. 1, including Video Memory 44, Memory Control 42 and RAM 38 and accompanying text.

EXHIBIT 15

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	Asserted claims	**Mahoney**
8.1	8. The method of simultaneously displaying and storing multiple video images, comprising the steps of:	"The system of detecting motion by means of a video detector which consists in directing at least one television camera (20) into the surveillance area, and reproducing the image from the said camera on a television (25) display screen, characterized in that the television screen display is divided into a matrix of elemental detection zones (15)...processing the elemental detection zones in each column in a sequential manner by integrating (28) a first detection zone in the column and at the last scan converting to digital format in an analogue-to-digital converter (29) and placing in a memory (49)." Abstract. "FIG. 3 shows such a window arrangement where the shaded areas 16 represent independent windows." 3: 68 – 4: 2.
8.2	receiving video images from a plurality of sources;	"With reference to FIG. 4, the video input signals from eight separate surveillance TV cameras are coupled to 8 separate operational amplifier integrators through 8 video switches, clamp/sync clippers and video amplifiers." 4: 41-45. FIG. 4 and accompanying text.
8.3	digitizing one or more of the images if not already in digital form;	"The digital output from the analogue-to-digital converter for every elemental detection zone is stored in a random access memory." 3: 47-49. "A relatively slow analogue-to-digital converter 39 with a 25 microsecond conversion time is suitable to convert the voltage output from the integrator 28 (corresponding to the integrated video signal over the elemental detection zone 15) to its 8 bit digital equivalent." 5: 34-38. FIGS. 4 and 9, including Analogue to Digital Converter 77 and accompanying text. FIG. 5, including Analogue to Digital Converter 29 and accompanying text.
8.4	displaying at least certain of the digitized images in separate windows on a display device, using a first, predetermined frame rate and resolution associated with each window; and	"...characterized in that the television screen display is divided into a matrix of elemental detection zones (15)." Abstract. "It can be seen that the elemental detection zones for each of the eight TV cameras are identical in height and width but with the matrix of elemental detection zones associated with consecutive TV cameras, displaced by one TV scan line." 4: 66 – 5: 2. "A further programmable counter 45 controls the number of scan lines defining the height of all elemental detection zones... The number of scan lines which defines the height of each elemental detection zone 15 is programmed by a switch assembly. Although the division ratio may be set in the range of 1 to 15, the elemental detection zone memory 49 capacity dictates a minimum height of a selected number of TV scan lines." 6: 11-21. "Referring to FIG. 1, the TV screen has a series of columns numbered 1

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		to 14 which each contain a series of elemental detection zones 15 having their height defined by a selected number of TV scan lines." 3: 21-24. "The video signal from any one of the eight surveillance TV cameras may be selected in the video display multiplexer 90 and presented on the TV monitor with the appropriate detection window 16 and underline strobes 62 superimposed. Selection is controlled by the display address from the display controller 83." 10: 20-25. "An amplified video signal is taken from the video processor 21 and fed to the mixer buffer amplifier 23 at which point the detection window 16, error strobes 62 and rectangle outline 63 are mixed with a video signal from the surveillance camera 20 for displaying on a conventional TV monitor 25." 5: 17-21. FIG. 1 and accompanying text. FIG. 2 and accompanying text. FIG. 3 and accompanying text. FIG. 5, including Television Monitor 25 and accompanying text. FIG. 9, including Television Monitor 92 and accompanying text.
8.5	simultaneously storing the displayed images using a second, predetermined frame rate and resolution associated with each image.	"The digital output from the analogue-to-digital convert for every elemental detection zone is stored in a random access memory." 3: 53-56. "Initially the 8 bit digital equivalent of every elemental detection zone 15 is stored in a 1024 x 8 bit CMOS random access memory 49." 6: 63-65. "In the example shown, the elemental detection zone memory capacity must be increased by a factor of 8 over the single camera design to accommodate data generated by digitizing the elemental detection zones 15 for eight TV cameras." 9: 42-46. FIG. 5, including Elemental Detection Zone Memory 49 and Detection Window Memory 50 and accompanying text. FIG. 9, including Elemental Detection Zone Memory 85, Display Detection Window Memory 88 and Alarm Detection Window Memory 89 and accompanying text.
12.1	12. The method of simultaneously displaying and storing multiple video images, comprising the steps of:	"The system of detecting motion by means of a video detector which consists in directing at least one television camera (20) into the surveillance area, and reproducing the image from the said camera on a television (25) display screen, characterized in that the television screen display is divided into a matrix of elemental detection zones (15)...processing the elemental detection zones in each column in a sequential manner by integrating (28) a first detection zone in the column and at the last scan converting to digital format in an analogue-to-digital converter (29) and placing in a memory (49)." Abstract. "FIG. 3 shows such a window arrangement where the shaded areas 16 represent independent windows." 3: 68 – 4: 2.
12.2	receiving video images from a plurality of sources;	"With reference to FIG. 4, the video input signals from eight separate surveillance TV cameras are coupled to 8 separate operational amplifier integrators through 8 video switches, clamp/sync clippers and video

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		amplifiers." 4: 41-45. FIG. 4 and accompanying text.
12.3	digitizing one or more of the images if not already in digital form;	"The digital output from the analogue-to-digital converter for every elemental detection zone is stored in a random access memory." 3: 47-49. "A relatively slow analogue-to-digital converter 39 with a 25 microsecond conversion time is suitable to convert the voltage output from the integrator 28 (corresponding to the integrated video signal over the elemental detection zone 15) to its 8 bit digital equivalent." 5: 34-38. FIGS. 4 and 9, including Analogue to Digital Converter 77 and accompanying text. FIG. 5, including Analogue to Digital Converter 29 and accompanying text.
12.4	displaying at least certain of the digitized images in separate windows on a display device, using a first set of temporal and spatial parameters associated with each image in each window;	"...characterized in that the television screen display is divided into a matrix of elemental detection zones (15)." Abstract. "It can be seen that the elemental detection zones for each of the eight TV cameras are identical in height and width but with the matrix of elemental detection zones associated with consecutive TV cameras, displaced by one TV scan line." 4: 66 – 5: 2. "A further programmable counter 45 controls the number of scan lines defining the height of all elemental detection zones... The number of scan lines which defines the height of each elemental detection zone 15 is programmed by a switch assembly. Although the division ratio may be set in the range of 1 to 15, the elemental detection zone memory 49 capacity dictates a minimum height of a selected number of TV scan lines." 6: 11-21. "...characterized in that the television screen display is divided into a matrix of elemental detection zones (15)." Abstract. "Referring to FIG. 1, the TV screen has a series of columns numbered 1 to 14 which each contain a series of elemental detection zones 15 having their height defined by a selected number of TV scan lines." 3: 21-24. "The video signal from any one of the eight surveillance TV cameras may be selected in the video display multiplexer 90 and presented on the TV monitor with the appropriate detection window 16 and underline strobes 62 superimposed. Selection is controlled by the display address from the display controller 83." 10: 20-25. "An amplified video signal is taken from the video processor 21 and fed to the mixer buffer amplifier 23 at which point the detection window 16, error strobes 62 and rectangle outline 63 are mixed with a video signal from the surveillance camera 20 for displaying on a conventional TV monitor 25." 5: 17-21. FIG. 1 and accompanying text.

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		FIG. 2 and accompanying text. FIG. 3 and accompanying text. FIG. 5, including Television Monitor 25 and accompanying text. FIG. 9, including Television Monitor 92 and accompanying text.
12.5	simultaneously storing the displayed images using a second set of temporal and spatial parameters associated with each image.	"The number of scan lines which defines the height of each elemental detection zone 15 is programmed by a switch assembly. Although the division ratio may be set in the range of 1 to 15, the elemental detection zone memory 49 capacity dictates a minimum height of a selected number of TV scan lines." 8: 15-21. "The digital output from the analogue-to-digital convert for every elemental detection zone is stored in a random access memory." 3: 53-56. "Initially the 8 bit digital equivalent of every elemental detection zone 15 is stored in a 1024 x 8 bit CMOS random access memory 49." 6: 63-65. "In the example shown, the elemental detection zone memory capacity must be increased by a factor of 8 over the single camera design to accommodate data generated by digitizing the elemental detection zones 15 for eight TV cameras." 9: 42-46. FIG. 5, including Elemental Detection Zone Memory 49 and Detection Window Memory 50 and accompanying text. FIG. 9, including Elemental Detection Zone Memory 85, Display Detection Window Memory 88 and Alarm Detection Window Memory 89 and accompanying text.
15.1	15. A video storage and display system, comprising:	"The system of detecting motion by means of a video detector which consists in directing at least one television camera (20) into the surveillance area, and reproducing the image from the said camera on a television (25) display screen, characterized in that the television screen display is divided into a matrix of elemental detection zones (15)...processing the elemental detection zones in each column in a sequential manner by integrating (28) a first detection zone in the column and at the last scan converting to digital format in an analogue-to-digital converter (29) and placing in a memory (49)." Abstract. "FIG. 3 shows such a window arrangement where the shaded areas 16 represent independent windows." 3: 68 – 4: 2.
15.2	a plurality of video cameras, each outputting a signal representative of a video image;	"With reference to FIG. 4, the video input signals from eight separate surveillance TV cameras are coupled to 8 separate operational amplifier integrators through 8 video switches, clamp/sync clippers and video amplifiers." 4: 41-45. FIG. 4 and accompanying text.
15.3	means to receive the signals from each camera and digitally compress the images; and	Means to receive the signals from each camera and digitally compress the images is Operational Amplifier Integrator 28 and Analogue to Digital Converters 29 and 77. "With reference to FIG. 4, the video input signals from eight separate surveillance TV cameras are coupled to 8 separate operational amplifier integrators through 8 video switches, clamp/sync clippers and video amplifiers." 4: 41-45.

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		"The digital output from the analogue-to-digital converter for every elemental detection zone is stored in a random access memory." 3: 47-49. "A relatively slow analogue-to-digital converter 39 with a 25 microsecond conversion time is suitable to convert the voltage output from the integrator 28 (corresponding to the integrated video signal over the elemental detection zone 15) to its 8 bit digital equivalent." 5: 34-38. FIGS. 4 and 9, including Analogue to Digital Converter 77 and accompanying text. FIG. 5, including Analogue to Digital Converter 29 and Operational Amplifier Integrator 28 and accompanying text.
15.4	a computer configured to receive the digitally compressed images, the computer being interfaced to the following devices:	FIG. 5, including Operational Amplifier Integrator 28 and accompanying text.
15.5	a display screen,	FIG. 5, including Television Monitor 25 and accompanying text. FIG. 9, including Television Monitor 92 and accompanying text.
15.6	means to receive externally derived operator commands including means for sensing a deviation from the normal-state image scene associated with at least one of the video cameras, the existence of the deviation being used as the basis for generating an externally derived command, and	Means to receive externally derived operator commands is "user programmable" Detection Window 16. Means for sensing a deviation from the normal-state image scene associated with at least one of the video cameras is Elemental Detection Zone Memory 49, Arithmetic Logic Unit 48, Movement Detector, Detection Window 16, and Alarm Circuitry 47. "The detection window is composed with the aid of a rectangle generator whose height, width and position is adjusted to surround a block of elemental detection zones, which can be added to or deleted from the detection window and thus the detection window is programmable and it is possible to programme areas in and out as desired." 3: 62-68. "...the output from the integrator is multiplexed to the A/D converter and converted to its binary equivalent. This binary number is then compared with its previously stored value to determine if a change has occurred." 4: 52-56. "This 8 bit output is compared in the arithmetic logic unit 48 with a previous value stored in the elemental detection zone memory 49 for the same elemental detection zone 15 to determine if a change in video signal has resulted." 6: 44-48. "The movement detector of this invention described particularly with reference to FIG. 7, features a unique concept of a user programmable detection window 16, this being accomplished by a separate 1024X1 bit random access memory 50 (RAM) which has one bit assigned to each elemental detection zone 15." 7: 52-57. "If the absolute difference between these two values exceeds the sensitivity setting, a carry bit or error signal is generated which is gated with the detection window 16 and fed to the alarm circuitry 47." 8: 21-25.
15.7	a high-capacity storage medium, and	"The digital output from the analogue-to-digital convert for every

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	programmed to perform the following functions:	elemental detection zone is stored in a random access memory." 3: 53-56. "Initially the 8 bit digital equivalent of every elemental detection zone 15 is stored in a 1024 x 8 bit CMOS random access memory 49." 6: 63-65. "In the example shown, the elemental detection zone memory capacity must be increased by a factor of 8 over the single camera design to accommodate data generated by digitizing the elemental detection zones 15 for eight TV cameras." 9: 42-46. FIG. 5, including Elemental Detection Zone Memory 49 and Detection Window Memory 50 and accompanying text. FIG. 9, including Elemental Detection Zone Memory 85, Display Detection Window Memory 88 and Alarm Detection Window Memory 89 and accompanying text.
15.8	display the digitally compressed images from the cameras in different windows on the display screen, each window being associated with an update rate and dimensions in pixels,	"...characterized in that the television screen display is divided into a matrix of elemental detection zones (15)." Abstract. "It can be seen that the elemental detection zones for each of the eight TV cameras are identical in height and width but with the matrix of elemental detection zones associated with consecutive TV cameras, displaced by one TV scan line." 4: 66 – 5: 2. "A further programmable counter 45 controls the number of scan lines defining the height of all elemental detection zones... The number of scan lines which defines the height of each elemental detection zone 15 is programmed by a switch assembly. Although the division ratio may be set in the range of 1 to 15, the elemental detection zone memory 49 capacity dictates a minimum height of a selected number of TV scan lines." 6: 11-21. "Referring to FIG. 1, the TV screen has a series of columns numbered 1 to 14 which each contain a series of elemental detection zones 15 having their height defined by a selected number of TV scan lines." 3: 21-24. "The video signal from any one of the eight surveillance TV cameras may be selected in the video display multiplexer 90 and presented on the TV monitor with the appropriate detection window 16 and underline strobes 62 superimposed. Selection is controlled by the display address from the display controller 83." 10: 20-25. "An amplified video signal is taken from the video processor 21 and fed to the mixer buffer amplifier 23 at which point the detection window 16, error strobes 62 and rectangle outline 63 are mixed with a video signal from the surveillance camera 20 for displaying on a conventional TV monitor 25." 5: 17-21. FIG. 1 and accompanying text. FIG. 2 and accompanying text. FIG. 3 and accompanying text. FIG. 5, including Television Monitor 25 and accompanying text.

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		FIG. 9, including Television Monitor 92 and accompanying text.
15.9	vary the dimensions and the rate at which a particular image is updated in its window in accordance with one of the externally derived commands,	"The system of detecting motion by means of a video detector which consists in...resetting the integrator to process the next elemental detection zone and so on." Abstract. "A further programmable counter 45 controls the number of scan lines defining the height of all elemental detection zones... The number of scan lines which defines the height of each elemental detection zone 15 is programmed by a switch assembly. Although the division ratio may be set in the range of 1 to 15, the elemental detection zone memory 49 capacity dictates a minimum height of a selected number of TV scan lines." 6: 11-21.
15.10	store the digitally compressed images in the high-capacity storage medium, and	"The number of scan lines which defines the height of each elemental detection zone 15 is programmed by a switch assembly. Although the division ratio may be set in the range of 1 to 15, the elemental detection zone memory 49 capacity dictates a minimum height of a selected number of TV scan lines." 6: 15-21. "The digital output from the analogue-to-digital convert for every elemental detection zone is stored in a random access memory." 3: 53-56. "Initially the 8 bit digital equivalent of every elemental detection zone 15 is stored in a 1024 x 8 bit CMOS random access memory 49." 6: 63-65. "In the example shown, the elemental detection zone memory capacity must be increased by a factor of 8 over the single camera design to accommodate data generated by digitizing the elemental detection zones 15 for eight TV cameras." 9: 42-46. FIG. 5, including Elemental Detection Zone Memory 49 and Detection Window Memory 50 and accompanying text. FIG. 9, including Elemental Detection Zone Memory 85, Display Detection Window Memory 88 and Alarm Detection Window Memory 89 and accompanying text.
15.11	vary the dimensions and the rate at which a particular image is stored in accordance with one of the externally derived commands.	"The memory update control 32 contains a programmable memory update counter whose output is applied to the write pulse logic 33 and which gates write pulses to the elemental detection zone memory 49... Memory update rates are thus a function of the selected number of columns." 7: 4-11. "The number of scan lines which defines the height of each elemental detection zone 15 is programmed by a switch assembly. Although the division ratio may be set in the range of 1 to 15, the elemental detection zone memory 49 capacity dictates a minimum height of a selected number of TV scan lines." 6: 15-21. "The digital output from the analogue-to-digital convert for every elemental detection zone is stored in a random access memory." 3: 53-56. "Initially the 8 bit digital equivalent of every elemental detection zone 15 is stored in a 1024 x 8 bit CMOS random access memory 49." 6: 63-65.

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		"In the example shown, the elemental detection zone memory capacity must be increased by a factor of 8 over the single camera design to accommodate data generated by digitizing the elemental detection zones 15 for eight TV cameras." 9: 42-46. FIG. 5, including Elemental Detection Zone Memory 49 and Detection Window Memory 50 and accompanying text. FIG. 9, including Elemental Detection Zone Memory 85, Display Detection Window Memory 88 and Alarm Detection Window Memory 89 and accompanying text.

EXHIBIT 16

#	USP 5,625,410	"Development and Picture Quality Evaluation of a Prototype Hi-Vision Coding System for Facility Monitoring" SPIE Vol. 2308 Publication Date: 9/16/1994
	Asserted claims	**Hasegawa**
8.1	8. The method of simultaneously displaying and storing multiple video images, comprising the steps of:	"A Hi-Vision video coding system has been developed to realize a high definition video surveillance system to observe various objects, such as important facilities, their construction works, details of their component blocks and machinery setup." Abstract. "Since cameras, monitors, VTRs, laser disk players and other basic video instruments in compliance with [NTSC] format are commercially available now, many kinds of industrial application are expected." 1884. "The video information is transformed into Huffman code at video multiplexing unit and temporarily stored in buffer memories. In accordance with the channel speed, transmitted video information is read out from this buffer." 1886.
8.2	receiving video images from a plurality of sources;	"To select a camera out of two or more is expected in remote surveillance operation....[T]he system has a built-in switcher. Two channels of NTSC input port are provided in addition to two Hi-Vision input ports." 1886. FIG. 7 and accompanying text.
8.3	digitizing one or more of the images if not already in digital form;	"...[E]ncoder/decoder system which compresses the information down to the reasonable speed of existing line is essential for widespread applications." 1884. "For such reason, the first step of the development for high definition video surveillance system was focused on the technology for Hi-Vision video compression down to 32 Mbps." 1884. "In addition to Hi-Vision video signal, NTSC has to be also encoded and decoded." 1885. "In the encoder, the pre-processing unit samples component analog video signals in order to convert them into digital forms." 1885. FIG. 7, including Decoder and accompanying text.
8.4	displaying at least certain of the digitized images in separate windows on a display device, using a first, predetermined frame rate and resolution associated with each window; and	"For such reason, NTSC coding capability is provided in the encoder by choosing appropriate video sample frequency, and simple NTSC/Hi-Vision convert(up—converter) is equipped on the decoder." 1886. "Since cameras, monitors, VTRs, laser disk players and other basic video instruments in compliance with [NTSC] format are commercially available now, many kinds of industrial application are expected." 1884. "In contrast to the 1920 pixels/line (full format) of the studio standard, 3/4, 2/3 and 1/2 picture formats were picked up to compare the compressed picture quality... From the results shown in FIG.3, FIG.4 and Table.3, it is understood that 2/3 format is the optimum because it produces almost the same SNR and satisfactory picture qualities for surveillance purpose." 1885. FIG. 7, including Monitor and accompanying text.
8.5	simultaneously storing the displayed	"The video information is transformed into Huffman code at video

#	USP 5,625,410	"Development and Picture Quality Evaluation of a Prototype Hi-Vision Coding System for Facility Monitoring" SPIE Vol. 2308 Publication Date: 9/16/1994
	images using a second, predetermined frame rate and resolution associated with each image.	multiplexing unit and temporarily stored in buffer memories. In accordance with the channel speed, transmitted video information is read out from this buffer." 1886.
12.1	12. The method of simultaneously displaying and storing multiple video images, comprising the steps of:	"A Hi-Vision video coding system has been developed to realize a high definition video surveillance system to observe various objects, such as important facilities, their construction works, details of their component blocks and machinery setup." Abstract. "Since cameras, monitors, VTRs, laser disk players and other basic video instruments in compliance with [NTSC] format are commercially available now, many kinds of industrial application are expected." 1884. "The video information is transformed into Huffman code at video multiplexing unit and temporarily stored in buffer memories. In accordance with the channel speed, transmitted video information is read out from this buffer." 1886.
12.2	receiving video images from a plurality of sources;	"To select a camera out of two or more is expected in remote surveillance operation....[T]he system has a built-in switcher. Two channels of NTSC input port are provided in addition to two Hi-Vision input ports." 1886.
12.3	digitizing one or more of the images if not already in digital form;	"...[E]ncoder/decoder system which compresses the information down to the reasonable speed of existing line is essential for widespread applications." 1884. "For such reason, the first step of the development for high definition video surveillance system was focused on the technology for Hi-Vision video compression down to 32 Mbps." 1884. "In addition to Hi-Vision video signal, NTSC has to be also encoded and decoded." 1885. "In the encoder, the pre-processing unit samples component analog video signals in order to convert them into digital forms." 1885. FIG. 7, including Decoder and accompanying text.
12.4	displaying at least certain of the digitized images in separate windows on a display device, using a first set of temporal and spatial parameters associated with each image in each window;	"For such reason, NTSC coding capability is provided in the encoder by choosing appropriate video sample frequency, and simple NTSC/Hi-Vision convert(up—converter) is equipped on the decoder." 1886. "Since cameras, monitors, VTRs, laser disk players and other basic video instruments in compliance with [NTSC] format are commercially available now, many kinds of industrial application are expected." 1884. "In contrast to the 1920 pixels/line (full format) of the studio standard, 3/4, 2/3 and 1/2 picture formats were picked up to compare the compressed picture quality... From the results shown in FIG.3, FIG.4 and Table.3, it is understood that 2/3 format is the optimum because it produces almost the same SNR and satisfactory picture qualities for surveillance purpose." 1885. FIG. 7, including Monitor and accompanying text.
12.5	simultaneously storing the displayed	"The video information is transformed into Huffman code at video

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	images using a second set of temporal and spatial parameters associated with each image.	multiplexing unit and temporarily stored in buffer memories. In accordance with the channel speed, transmitted video information is read out from this buffer." 1886.
15.1	15. A video storage and display system, comprising:	"A Hi-Vision video coding system has been developed to realize a high definition video surveillance system to observe various objects, such as important facilities, their construction works, details of their component blocks and machinery setup." Abstract. "Since cameras, monitors, VTRs, laser disk players and other basic video instruments in compliance with [NTSC] format are commercially available now, many kinds of industrial application are expected." 1884. "The video information is transformed into Huffman code at video multiplexing unit and temporarily stored in buffer memories. In accordance with the channel speed, transmitted video information is read out from this buffer." 1886.
15.2	a plurality of video cameras, each outputting a signal representative of a video image;	"To select a camera out of two or more is expected in remote surveillance operation....[T]he system has a built-in switcher. Two channels of NTSC input port are provided in addition to two Hi-Vision input ports." 1886.
15.3	means to receive the signals from each camera and digitally compress the images; and	Means to receive the signals from each camera and digitally compress the images is Decoder and Pre-Processing Unit. "...[E]ncoder/decoder system which compresses the information down to the reasonable speed of existing line is essential for widespread applications." 1884. "For such reason, the first step of the development for high definition video surveillance system was focused on the technology for Hi-Vision video compression down to 32 Mbps." 1884. "In addition to Hi-Vision video signal, NTSC has to be also encoded and decoded." 1885. "In the encoder, the pre-processing unit samples component analog video signals in order to convert them into digital forms." 1885. FIG. 7, including Decoder and accompanying text.
15.4	a computer configured to receive the digitally compressed images, the computer being interfaced to the following devices:	"Finally, they are inserted into the center of Hi-vision image frame with color conversion (Y,Cb,Cr to Y,Pb,Pr) being done and Hi-vision component signals are obtained. If NTSC cameras are selected for the encoder side, NTSC video for NTSC monitor is also available at the decoder to match the existing surveillance display systems." 1886.
15.5	a display screen,	FIG. 7, including Monitor and accompanying text.
15.6	means to receive externally derived operator commands including means for sensing a deviation from the normal-state image scene associated with at least one of the video cameras, the existence of the deviation being used as the basis for generating an externally derived command, and	To the extent the reference does not explicitly disclose means to receive externally derived operator commands including means for sensing a deviation from the normal-state image scene associated with at least one of the video cameras, this limitation is inherent in the disclosure.

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15.7	a high-capacity storage medium, and programmed to perform the following functions:	"The video information is transformed into Huffman code at video multiplexing unit and temporarily stored in buffer memories. In accordance with the channel speed, transmitted video information is read out from this buffer." 1886.
15.8	display the digitally compressed images from the cameras in different windows on the display screen, each window being associated with an update rate and dimensions in pixels,	"Since cameras, monitors, VTRs, laser disk players and other basic video instruments in compliance with [NTSC] format are commercially available now, many kinds of industrial application are expected." 1884. "In contrast to the 1920 pixels/line (full format) of the studio standard, 3/4, 2/3 and 1/2 picture formats were picked up to compare the compressed picture quality... From the results shown in FIG.3, FIG.4 and Table.3, it is understood that 2/3 format is the optimum because it produces almost the same SNR and satisfactory picture qualities for surveillance purpose." 1885. FIG. 7, including Monitor and accompanying text.
15.9	vary the dimensions and the rate at which a particular image is updated in its window in accordance with one of the externally derived commands,	"Since cameras, monitors, VTRs, laser disk players and other basic video instruments in compliance with [NTSC] format are commercially available now, many kinds of industrial application are expected." 1884. "In contrast to the 1920 pixels/line (full format) of the studio standard, 3/4, 2/3 and 1/2 picture formats were picked up to compare the compressed picture quality... From the results shown in FIG.3, FIG.4 and Table.3, it is understood that 2/3 format is the optimum because it produces almost the same SNR and satisfactory picture qualities for surveillance purpose." 1885. FIG. 7, including Monitor and accompanying text. To the extent the reference does not explicitly disclose externally derived operator commands, this limitation is inherent in the disclosure.
15.10	store the digitally compressed images in the high-capacity storage medium, and	"The video information is transformed into Huffman code at video multiplexing unit and temporarily stored in buffer memories. In accordance with the channel speed, transmitted video information is read out from this buffer." 1886.
15.11	vary the dimensions and the rate at which a particular image is stored in accordance with one of the externally derived commands.	"The video information is transformed into Huffman code at video multiplexing unit and temporarily stored in buffer memories. In accordance with the channel speed, transmitted video information is read out from this buffer." 1886. To the extent the reference does not explicitly disclose externally derived operator commands, this limitation is inherent in the disclosure.

EXHIBIT 17

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	Asserted claims	**Katona**
8.1	8. The method of simultaneously displaying and storing multiple video images, comprising the steps of:	"To provide a controlling and monitoring device for a video recording device capable of displaying centrally data from a plurality of video recording devices... capable of storing data that has been collected... and displaying data that has been collected." Abstract. "The data collecting and controlling device 4 not only stores in the long-term storing device...the data that has been collected, but also displays this data on the display device (such as CRT) 7." 0009. "In Step ST-6, the data collecting and controlling device 4 displays the data on the displaying device 7 and saves the data in the long-term storing device 6." 0019. FIG. 1, including Long-Term Storing Device and Displaying Device and accompanying text.
8.2	receiving video images from a plurality of sources;	"[T]he present invention proposes a controlling and monitoring device for a video recording device capable of: displaying in a single centralized location data collected from multiple video recording devices." 0004. "To provide a controlling and monitoring device for a video recording device capable of displaying centrally data from a plurality of video recording devices." Abstract.
8.3	digitizing one or more of the images if not already in digital form;	"The universal asynchronous receiver/transmitter devices not only decode serial data streams, but also convert to byte parallel data, and supply these data to the data collecting and controlling device of FIG. 1 and FIG. 3 through a data bus 18 and a microprocessor interface 19." 0015.
8.4	displaying at least certain of the digitized images in separate windows on a display device, using a first, predetermined frame rate and resolution associated with each window; and	"The controlling and monitoring device for a video recording device according to the present invention comprises:... displaying means 7 for displaying data that has been collected and analyzed." 0005. "The data collecting and controlling device 4 not only stores in the long-term storing device...the data that has been collected, but also displays this data on the display device (such as CRT) 7." 0009. FIG. 1, Displaying Device
8.5	simultaneously storing the displayed images using a second, predetermined frame rate and resolution associated with each image.	"The controlling and monitoring device for a video recording device according to the present invention comprises:... storing means 6 for storing data that has been collected." 0005. "The data collecting and controlling device 4 not only stores in the long-term storing device...the data that has been collected, but also displays this data on the display device (such as CRT) 7." 0009. "The universal asynchronous receiver/transmitter devices not only decode serial data streams, but also convert to byte parallel data, and supply these data to the data collecting and controlling device of FIG. 1 and FIG. 3 through a data bus 18 and a microprocessor interface 19." 0015. "In Step ST-6, the data collecting and controlling device 4 displays the data on the displaying device 7 and saves the data in the long-term

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		storing device 6." 0019. FIG. 1, including Long-Term Storing Device and accompanying text.
12.1	12. The method of simultaneously displaying and storing multiple video images, comprising the steps of:	"To provide a controlling and monitoring device for a video recording device capable of displaying centrally data from a plurality of video recording devices... capable of storing data that has been collected... and displaying data that has been collected." Abstract. "The data collecting and controlling device 4 not only stores in the long-term storing device...the data that has been collected, but also displays this data on the display device (such as CRT) 7." 0009. "In Step ST-6, the data collecting and controlling device 4 displays the data on the displaying device 7 and saves the data in the long-term storing device 6." 0019. FIG. 1, including Long-Term Storing Device and Displaying Device and accompanying text.
12.2	receiving video images from a plurality of sources;	"[T]he present invention proposes a controlling and monitoring device for a video recording device capable of: displaying in a single centralized location data collected from multiple video recording devices." 0004. "To provide a controlling and monitoring device for a video recording device capable of displaying centrally data from a plurality of video recording devices." 0005.
12.3	digitizing one or more of the images if not already in digital form;	"The universal asynchronous receiver/transmitter devices not only decode serial data streams, but also convert to byte parallel data, and supply these data to the data collecting and controlling device of FIG. 1 and FIG. 3 through a data bus 18 and a microprocessor interface 19." 0015.
12.4	displaying at least certain of the digitized images in separate windows on a display device, using a first set of temporal and spatial parameters associated with each image in each window;	"The controlling and monitoring device for a video recording device according to the present invention comprises:... displaying means 7 for displaying data that has been collected and analyzed." 0005. "The data collecting and controlling device 4 not only stores in the long-term storing device...the data that has been collected, but also displays this data on the display device (such as CRT) 7." 0009. "The universal asynchronous receiver/transmitter devices not only decode serial data streams, but also convert to byte parallel data, and supply these data to the data collecting and controlling device of FIG. 1 and FIG. 3 through a data bus 18 and a microprocessor interface 19." 0015. "The data collecting and controlling device 4 not only stores in the long-term storing device...the data that has been collected, but also displays this data on the display device (such as CRT) 7." 0009. FIG. 1, including Displaying Device and accompanying text.
12.5	simultaneously storing the displayed images using a second set of temporal and spatial parameters associated with each image.	"The controlling and monitoring device for a video recording device according to the present invention comprises:... storing means 6 for storing data that has been collected." 0005. "The data collecting and controlling device 4 not only stores in the long-

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		term storing device...the data that has been collected, but also displays this data on the display device (such as CRT) 7." 0009. "In Step ST-6, the data collecting and controlling device 4 displays the data on the displaying device 7 and saves the data in the long-term storing device 6." 0019. FIG. 1, including Long-Term Storing Device and accompanying text.
15.1	15. A video storage and display system, comprising:	"To provide a controlling and monitoring device for a video recording device capable of displaying centrally data from a plurality of video recording devices... capable of storing data that has been collected... and displaying data that has been collected." Abstract. "The data collecting and controlling device 4 not only stores in the long-term storing device...the data that has been collected, but also displays this data on the display device (such as CRT) 7." 0009. "In Step ST-6, the data collecting and controlling device 4 displays the data on the displaying device 7 and saves the data in the long-term storing device 6." 0019. FIG. 1, including Long-Term Storing Device and Displaying Device
15.2	a plurality of video cameras, each outputting a signal representative of a video image;	"[T]he present invention proposes a controlling and monitoring device for a video recording device capable of: displaying in a single centralized location data collected from multiple video recording devices." 0004. "To provide a controlling and monitoring device for a video recording device capable of displaying centrally data from a plurality of video recording devices." 0005.
15.3	means to receive the signals from each camera and digitally compress the images; and	Means to receive the signals from each camera and digitally compress the images is receiver/transmitter devices, Data Collecting and Controlling Device 4, Data Bus 18, and Microprocessor Interface 19. "The universal asynchronous receiver/transmitter devices not only decode serial data streams, but also convert to byte parallel data, and supply these data to the data collecting and controlling device of FIG. 1 and FIG. 3 through a data bus 18 and a microprocessor interface 19." 0015.
15.4	a computer configured to receive the digitally compressed images, the computer being interfaced to the following devices:	FIG. 1, including Data Collecting Device
15.5	a display screen,	Fig. 1, including Displaying Device
15.6	means to receive externally derived operator commands including means for sensing a deviation from the normal-state image scene associated with at least one of the video cameras, the existence of the deviation being used as the basis for generating an externally derived command, and	Means to receive externally derived operator commands is Data Collecting and Controlling Device 4 and User Inputting Device 8. "The controlling and monitoring device for a video recording device according to the present invention comprises: controlling means 4 for controlling a plurality of video recording devices based on commands generated locally and commands read in from a user." 0005. "The functions of the data collecting and controlling device 4 can vary depending on the information that is read in from a user inputting device (a keyboard, or the like) 8." 0011.

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		"Additionally, in Step ST-16, the data collecting and controlling device 4 determines whether or not there has been some type of input from the user through the user inputting device 8...if YES, then the user input is analyzed, and an action is performed in response to that command." 0023. FIG. 1, including User Inputting Device
15.7	a high-capacity storage medium, and programmed to perform the following functions:	"The controlling and monitoring device for a video recording device according to the present invention comprises:... storing means 6 for storing data that has been collected." 0005. "The data collecting and controlling device 4 not only stores in the long-term storing device...the data that has been collected, but also displays this data on the display device (such as CRT) 7." 0009. "In Step ST-6, the data collecting and controlling device 4 displays the data on the displaying device 7 and saves the data in the long-term storing device 6." 0019. FIG. 1, including Long-Term Storing Device and accompanying text.
15.8	display the digitally compressed images from the cameras in different windows on the display screen, each window being associated with an update rate and dimensions in pixels,	"The controlling and monitoring device for a video recording device according to the present invention comprises:... displaying means 7 for displaying data that has been collected and analyzed." 0005. "The data collecting and controlling device 4 not only stores in the long-term storing device...the data that has been collected, but also displays this data on the display device (such as CRT) 7." 0009. FIG. 1, including Displaying Device and accompanying text.
15.9	vary the dimensions and the rate at which a particular image is updated in its window in accordance with one of the externally derived commands,	"The controlling and monitoring device for a video recording device according to the present invention comprises: controlling means 4 for controlling a plurality of video recording devices based on commands generated locally and commands read in from a user...displaying means 7 for displaying data that has been collected and analyzed." 0005. "In Step ST-20, a determination is made as to whether or not the user has requested that monitoring be stopped...if YES, then processing advances to Step ST-26, and the data collecting and controlling device 4 requests that the communications interface stop communications with the specific VTR." 0027. FIG. 1, including Displaying Device
15.10	store the digitally compressed images in the high-capacity storage medium, and	"The controlling and monitoring device for a video recording device according to the present invention comprises:... storing means 6 for storing data that has been collected." 0005. "The data collecting and controlling device 4 not only stores in the long-term storing device...the data that has been collected, but also displays this data on the display device (such as CRT) 7." 0009. "In Step ST-6, the data collecting and controlling device 4 displays the data on the displaying device 7 and saves the data in the long-term storing device 6." 0019.

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		FIG. 1, including Long-Term Storing Device and accompanying text.
15.11	vary the dimensions and the rate at which a particular image is stored in accordance with one of the externally derived commands.	"The controlling and monitoring device for a video recording device according to the present invention comprises: controlling means 4 for controlling a plurality of video recording devices based on commands generated locally and commands read in from a user... storing means 6 for storing data that has been collected." 0005. "The data collecting and controlling device 4 not only stores in the long-term storing device...the data that has been collected, but also displays this data on the display device (such as CRT) 7." 0009. "In Step ST-6, the data collecting and controlling device 4 displays the data on the displaying device 7 and saves the data in the long-term storing device 6." 0019. FIG. 1, including Long-Term Storing Device and accompanying text.

EXHIBIT 18

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	Asserted claims	**Downs**
8.1	8. The method of simultaneously displaying and storing multiple video images, comprising the steps of:	"A computer-implemented process, apparatus, and system for displaying multiple video streams at the same time on a single display monitor, where at least two of the video streams may have different frame rates." Abstract. "According to a preferred embodiment of the present invention, the system comprises a host processor, a display monitor, and a video subsystem. The video subsystem comprises a memory device and a display controller." 2: 23-25.
8.2	receiving video images from a plurality of sources;	"The present invention is a computer-implemented process, apparatus, and system for displaying a plurality of video signals on a display monitor. The plurality of video signals comprises a video signal A and video signal B." 2: 19-22.
8.3	digitizing one or more of the images if not already in digital form;	"Video subsystem 106 decodes the analog signal into component signals (e.g., Y, U, and V, or R, G, and B), digitizes each component signal, and encodes the digital signal for each component. Host processor 102 accesses the encoded video signal from video subsystem 107 via system bus 112 and transmits the encoded video signal to each of the remote participants via an external communications path." 3: 12-18. "Specifically, the video capture controller 204 receives an analog video signal from video generator 104 of FIG. 1, and decodes and digitizes the analog signal into digital signals for three components." 3: 59-62. "Video capture controller 204 may be a conventional means for decoding, digitizing, and capturing video signals and is preferably an ATI 68890 capture processor." 4: 22-24. FIG. 1, including Video Subsystem 106 and accompanying text. FIG. 2, including Video Capture Controller 204 and accompanying text.
8.4	displaying at least certain of the digitized images in separate windows on a display device, using a first, predetermined frame rate and resolution associated with each window; and	"Referring now to FIG. 1, there is shown a block diagram of video system 100 for displaying one or more video streams on a single display monitor, according to a preferred embodiment of the present invention." 2: 58-61. "For one or more video streams, video subsystem 106 decodes the encoded video signal, and scales and converts the decoded signal for display. In addition, video subsystem 106 optionally merges the multiple video signals with graphics signals and transmits the merged signals for display on display monitor 108." 3: 23-28. "Display monitor 108 may be a conventional display monitor and is preferably an NEC MultiSync 4FGe monitor." 3: 3: 41-43. "Each control block contains information about the scaling, converting and merging of a single unscaled bitmap in memory device 208 for display. For example, a control block may comprise (at least) the

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		following information:... Pixel format of source (i.e., full resolution or a subsampled format); Dimensions of source (i.e., length and width of display window within display raster)." 4: 40-56. "In a preferred embodiment, graphics/display controller 210 may be used to either scale up (i.e., enlarge) or scale down (i.e., shrink) the unscaled bitmaps." 4: 61-63. "Table II presents the enable/disable flags for the first seven control cycles for an example of two video streams A and B having three bitmaps each, where video stream A has a frame rate of 15 FPS and video stream B has a frame rate of 30 FPS. In the example of Table II, a control block for each of video stream A and B is enabled in each control cycle. Since video stream A has a frame rate that is half the frame rate of video stream B, the control blocks for video stream A are updated half as frequently as the control blocks for video stream B.... By repeating the sequence of the first six control cycles of Table II, the display of each frame of video stream A is repeated to synchronize the display of video stream A with the display of video stream B." 5: 63 – 6: 30. "Those skilled in the art will also understand that the present invention may be used to display two or more video streams having frame rates other than those in the above-described examples." 6: 36-39. Tables I and II, and accompanying text. FIG. 1, including Display Monitor 108, Video Subsystem 106, and accompanying text. FIG. 2, including Graphics/Display Controller 210 and accompanying text.
8.5	simultaneously storing the displayed images using a second, predetermined frame rate and resolution associated with each image.	"Capture controller 204 also scales the digital signals for capture and stores the captured signals as captured bitmaps in memory device 208 via subsystem 214. Pixel processor 206 accesses the captured signals from memory device 208 via the subsystem bus 214, encodes the captured signals, and stores the encoded signals back to memory device 208 via subsystem bus 214." 3: 62 – 4: 1. "Memory device 208 may be a conventional device for storing digital signals and is preferably a dynamic random access memory (DRAM) device." 4: 29-31. "Each control block contains information about the scaling, converting and merging of a single unscaled bitmap in memory device 208 for display. For example, a control block may comprise (at least) the following information:... Pixel format of source (i.e., full resolution or a subsampled format); Dimensions of source (i.e., length and width of display window within display raster)." 4: 40-56. "In a preferred embodiment, graphics/display controller 210 may be used to either scale up (i.e., enlarge) or scale down (i.e., shrink) the unscaled bitmaps." 4: 61-63. "Table II presents the enable/disable flags for the first seven control cycles for an example of two video streams A and B having three

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		bitmaps each, where video stream A has a frame rate of 15 FPS and video stream B has a frame rate of 30 FPS. In the example of Table II, a control block for each of video stream A and B is enabled in each control cycle. Since video stream A has a frame rate that is half the frame rate of video stream B, the control blocks for video stream A are updated half as frequently as the control blocks for video stream B.... By repeating the sequence of the first six control cycles of Table II, the display of each frame of video stream A is repeated to synchronize the display of video stream A with the display of video stream B." 5: 63 – 6: 30. "Those skilled in the art will also understand that the present invention may be used to display two or more video streams having frame rates other than those in the above-described examples." 6: 36-39. FIG. 2, including Video Capture Controller 204, Memory Device 208, Graphics/Display Controller 210 and accompanying text.
12.1	12. The method of simultaneously displaying and storing multiple video images, comprising the steps of:	"A computer-implemented process, apparatus, and system for displaying multiple video streams at the same time on a single display monitor, where at least two of the video streams may have different frame rates." Abstract. "According to a preferred embodiment of the present invention, the system comprises a host processor, a display monitor, and a video subsystem. The video subsystem comprises a memory device and a display controller." 2: 23-25.
12.2	receiving video images from a plurality of sources;	"The present invention is a computer-implemented process, apparatus, and system for displaying a plurality of video signals on a display monitor. The plurality of video signals comprises a video signal A and video signal B." 2: 19-22.
12.3	digitizing one or more of the images if not already in digital form;	"Video subsystem 106 decodes the analog signal into component signals (e.g., Y, U, and V, or R, G, and B), digitizes each component signal, and encodes the digital signal for each component. Host processor 102 accesses the encoded video signal from video subsystem 107 via system bus 112 and transmits the encoded video signal to each of the remote participants via an external communications path." 3: 12-18. "Specifically, the video capture controller 204 receives an analog video signal from video generator 104 of FIG. 1, and decodes and digitizes the analog signal into digital signals for three components." 3: 59-62. "Video capture controller 204 may be a conventional means for decoding, digitizing, and capturing video signals and is preferably an ATI 68890 capture processor." 4: 22-24. FIG. 1, including Video Subsystem 106 and accompanying text. FIG. 2, including Video Capture Controller 204 and accompanying text.
12.4	displaying at least certain of the digitized images in separate windows on a display device, using a first set of temporal and spatial parameters associated with each	"Referring now to FIG. 1, there is shown a block diagram of video system 100 for displaying one or more video streams on a single display monitor, according to a preferred embodiment of the present invention." 2: 58-61.

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	image in each window;	"For one or more video streams, video subsystem 106 decodes the encoded video signal, and scales and converts the decoded signal for display. In addition, video subsystem 106 optionally merges the multiple video signals with graphics signals and transmits the merged signals for display on display monitor 108." 3: 23-28. "Display monitor 108 may be a conventional display monitor and is preferably an NEC MultiSync 4FGe monitor." 3: 3: 41-43. "Each control block contains information about the scaling, converting and merging of a single unscaled bitmap in memory device 208 for display. For example, a control block may comprise (at least) the following information:... Pixel format of source (i.e., full resolution or a subsampled format); Dimensions of source (i.e., length and width of display window within display raster)." 4: 40-56. "In a preferred embodiment, graphics/display controller 210 may be used to either scale up (i.e., enlarge) or scale down (i.e., shrink) the unscaled bitmaps." 4: 61-63. "Table II presents the enable/disable flags for the first seven control cycles for an example of two video streams A and B having three bitmaps each, where video stream A has a frame rate of 15 FPS and video stream B has a frame rate of 30 FPS. In the example of Table II, a control block for each of video stream A and B is enabled in each control cycle. Since video stream A has a frame rate that is half the frame rate of video stream B, the control blocks for video stream A are updated half as frequently as the control blocks for video stream B.... By repeating the sequence of the first six control cycles of Table II, the display of each frame of video stream A is repeated to synchronize the display of video stream A with the display of video stream B." 5: 63 – 6: 30. "Those skilled in the art will also understand that the present invention may be used to display two or more video streams having frame rates other than those in the above-described examples." 6: 36-39. Tables I and II, and accompanying text. FIG. 1, including Display Monitor 108, Video Subsystem 106, and accompanying text. FIG. 2, including Graphics/Display Controller 210 and accompanying text.
12.5	simultaneously storing the displayed images using a second set of temporal and spatial parameters associated with each image.	"Capture controller 204 also scales the digital signals for capture and stores the captured signals as captured bitmaps in memory device 208 via subsystem 214. Pixel processor 206 accesses the captured signals from memory device 208 via the subsystem bus 214, encodes the captured signals, and stores the encoded signals back to memory device 208 via subystem bus 214." 3: 62 – 4: 1. "Memory device 208 may be a conventional device for storing digital signals and is preferably a dynamic random access memory (DRAM) device." 4: 29-31.

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		"Each control block contains information about the scaling, converting and merging of a single unscaled bitmap in memory device 208 for display. For example, a control block may comprise (at least) the following information:... Pixel format of source (i.e., full resolution or a subsampled format); Dimensions of source (i.e., length and width of display window within display raster)." 4: 40-56. "In a preferred embodiment, graphics/display controller 210 may be used to either scale up (i.e., enlarge) or scale down (i.e., shrink) the unscaled bitmaps." 4: 61-63. "Table II presents the enable/disable flags for the first seven control cycles for an example of two video streams A and B having three bitmaps each, where video stream A has a frame rate of 15 FPS and video stream B has a frame rate of 30 FPS. In the example of Table II, a control block for each of video stream A and B is enabled in each control cycle. Since video stream A has a frame rate that is half the frame rate of video stream B, the control blocks for video stream A are updated half as frequently as the control blocks for video stream B.... By repeating the sequence of the first six control cycles of Table II, the display of each frame of video stream A is repeated to synchronize the display of video stream A with the display of video stream B." 5: 63 – 6: 30. "Those skilled in the art will also understand that the present invention may be used to display two or more video streams having frame rates other than those in the above-described examples." 6: 36-39. FIG. 2, including Video Capture Controller 204, Memory Device 208, Graphics/Display Controller 210 and accompanying text.
15.1	15. A video storage and display system, comprising:	"A computer-implemented process, apparatus, and system for displaying multiple video streams at the same time on a single display monitor, where at least two of the video streams may have different frame rates." Abstract. "According to a preferred embodiment of the present invention, the system comprises a host processor, a display monitor, and a video subsystem. The video subsystem comprises a memory device and a display controller." 2: 23-25.
15.2	a plurality of video cameras, each outputting a signal representative of a video image;	"One possible application for video system 100 is in video conferencing between two or more remotely located participants, where each participant uses a local video system 100. Video system 100 generates encoded video signals corresponding to the participant and transmits the encoded video signals to each of the other remote participants." 2: 64 – 3: 2. "Video generator 104 may be a conventional video camera." 3: 39-40. FIG. 1, including Video Generator 104 and accompanying text. To the extent the reference does not explicitly disclose a plurality of video cameras, this limitation is inherent in this disclosure.

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15.3	means to receive the signals from each camera and digitally compress the images; and	Means to receive the signals from each camera and digitally compress the images is Video Subsystem 106, Host Processor 102, and Video Capture Controller 204. "Video subsystem 106 decodes the analog signal into component signals (e.g., Y, U, and V, or R, G, and B), digitizes each component signal, and encodes the digital signal for each component. Host processor 102 accesses the encoded video signal from video subsystem 107 via system bus 112 and transmits the encoded video signal to each of the remote participants via an external communications path." 3: 12-18. "Specifically, the video capture controller 204 receives an analog video signal from video generator 104 of FIG. 1, and decodes and digitizes the analog signal into digital signals for three components." 3: 59-62. "Video capture controller 204 may be a conventional means for decoding, digitizing, and capturing video signals and is preferably an ATI 68890 capture processor." 4: 22-24. FIG. 1, including Video Subsystem 106 and accompanying text. FIG. 2, including Video Capture Controller 204 and accompanying text.
15.4	a computer configured to receive the digitally compressed images, the computer being interfaced to the following devices:	FIG. 1, including Host Processor 102 and Video Subsystem 106 and accompanying text.
15.5	a display screen,	FIG. 1, including Display Monitor 108 and accompanying text.
15.6	means to receive externally derived operator commands including means for sensing a deviation from the normal-state image scene associated with at least one of the video cameras, the existence of the deviation being used as the basis for generating an externally derived command, and	To the extent the reference does not explicitly disclose means to receive externally derived operator commands including means for sensing a deviation from the normal-state image scene associated with at least one of the video cameras, this limitation is inherent in this disclosure.
15.7	a high-capacity storage medium, and programmed to perform the following functions:	"Capture controller 204 also scales the digital signals for capture and stores the captured signals as captured bitmaps in memory device 208 via subsystem 214. Pixel processor 206 accesses the captured signals from memory device 208 via the subsystem bus 214, encodes the captured signals, and stores the encoded signals back to memory device 208 via subsystem bus 214." 3: 62 – 4: 1. "Memory device 208 may be a conventional device for storing digital signals and is preferably a dynamic random access memory (DRAM) device." 4: 29-31. FIG. 2, including Video Capture Controller 204, Memory Device 208 and accompanying text.
15.8	display the digitally compressed images from the cameras in different windows on the display screen, each window being associated with an update rate and dimensions in pixels,	"Referring now to FIG. 1, there is shown a block diagram of video system 100 for displaying one or more video streams on a single display monitor, according to a preferred embodiment of the present invention." 2: 58-61. "For one or more video streams, video subsystem 106 decodes the

#	USP 5,625,410	U.S. Patent No. 5,548,324 Filing date: 5/16/1994 Issue date: 8/20/1996
		encoded video signal, and scales and converts the decoded signal for display. In addition, video subsystem 106 optionally merges the multiple video signals with graphics signals and transmits the merged signals for display on display monitor 108." 3: 23-28. "Display monitor 108 may be a conventional display monitor and is preferably an NEC MultiSync 4FGe monitor." 3: 3: 41-43. "Each control block contains information about the scaling, converting and merging of a single unscaled bitmap in memory device 208 for display. For example, a control block may comprise (at least) the following information:... Pixel format of source (i.e., full resolution or a subsampled format); Dimensions of source (i.e., length and width of display window within display raster)." 4: 40-56. "In a preferred embodiment, graphics/display controller 210 may be used to either scale up (i.e., enlarge) or scale down (i.e., shrink) the unscaled bitmaps." 4: 61-63. "Table II presents the enable/disable flags for the first seven control cycles for an example of two video streams A and B having three bitmaps each, where video stream A has a frame rate of 15 FPS and video stream B has a frame rate of 30 FPS. In the example of Table II, a control block for each of video stream A and B is enabled in each control cycle. Since video stream A has a frame rate that is half the frame rate of video stream B, the control blocks for video stream A are updated half as frequently as the control blocks for video stream B.... By repeating the sequence of the first six control cycles of Table II, the display of each frame of video stream A is repeated to synchronize the display of video stream A with the display of video stream B." 5: 63 – 6: 30. "Those skilled in the art will also understand that the present invention may be used to display two or more video streams having frame rates other than those in the above-described examples." 6: 36-39. Tables I and II, and accompanying text. FIG. 1, including Display Monitor 108, Video Subsystem 106, and accompanying text. FIG. 2, including Graphics/Display Controller 210 and accompanying text.
15.9	vary the dimensions and the rate at which a particular image is updated in its window in accordance with one of the externally derived commands,	"Referring now to FIG. 1, there is shown a block diagram of video system 100 for displaying one or more video streams on a single display monitor, according to a preferred embodiment of the present invention." 2: 58-61. "Table II presents the enable/disable flags for the first seven control cycles for an example of two video streams A and B having three bitmaps each, where video stream A has a frame rate of 15 FPS and video stream B has a frame rate of 30 FPS. In the example of Table II, a control block for each of video stream A and B is enabled in each control cycle. Since video stream A has a frame rate that is half the frame rate of video stream B, the control blocks for video stream A are updated half as frequently as the control blocks for video stream B.... By repeating

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		the sequence of the first six control cycles of Table II, the display of each frame of video stream A is repeated to synchronize the display of video stream A with the display of video stream B." 5: 63 – 6: 30. To the extent the reference does not explicitly disclose externally derived operator commands, this limitation is inherent in this disclosure.
15.10	store the digitally compressed images in the high-capacity storage medium, and	"Capture controller 204 also scales the digital signals for capture and stores the captured signals as captured bitmaps in memory device 208 via subsystem 214. Pixel processor 206 accesses the captured signals from memory device 208 via the subsystem bus 214, encodes the captured signals, and stores the encoded signals back to memory device 208 via subsystem bus 214." 3: 62 – 4: 1. "Memory device 208 may be a conventional device for storing digital signals and is preferably a dynamic random access memory (DRAM) device." 4: 29-31. "Each control block contains information about the scaling, converting and merging of a single unscaled bitmap in memory device 208 for display. For example, a control block may comprise (at least) the following information:... Pixel format of source (i.e., full resolution or a subsampled format); Dimensions of source (i.e., length and width of display window within display raster)." 4: 40-56. FIG. 2, including Video Capture Controller 204, Memory Device 208, and accompanying text.
15.11	vary the dimensions and the rate at which a particular image is stored in accordance with one of the externally derived commands.	"Capture controller 204 also scales the digital signals for capture and stores the captured signals as captured bitmaps in memory device 208 via subsystem 214. Pixel processor 206 accesses the captured signals from memory device 208 via the subsystem bus 214, encodes the captured signals, and stores the encoded signals back to memory device 208 via subsystem bus 214." 3: 62 – 4: 1. "Memory device 208 may be a conventional device for storing digital signals and is preferably a dynamic random access memory (DRAM) device." 4: 29-31. "Each control block contains information about the scaling, converting and merging of a single unscaled bitmap in memory device 208 for display. For example, a control block may comprise (at least) the following information:... Pixel format of source (i.e., full resolution or a subsampled format); Dimensions of source (i.e., length and width of display window within display raster)." 4: 40-56. "In a preferred embodiment, graphics/display controller 210 may be used to either scale up (i.e., enlarge) or scale down (i.e., shrink) the unscaled bitmaps." 4: 61-63. "Table II presents the enable/disable flags for the first seven control cycles for an example of two video streams A and B having three bitmaps each, where video stream A has a frame rate of 15 FPS and video stream B has a frame rate of 30 FPS. In the example of Table II, a control block for each of video stream A and B is enabled in each control

#	USP 5,625,410	U.S. Patent No. 5,548,324 Filing date: 5/16/1994 Issue date: 8/20/1996
		cycle. Since video stream A has a frame rate that is half the frame rate of video stream B, the control blocks for video stream A are updated half as frequently as the control blocks for video stream B.... By repeating the sequence of the first six control cycles of Table II, the display of each frame of video stream A is repeated to synchronize the display of video stream A with the display of video stream B." 5: 63 – 6: 30. "Those skilled in the art will also understand that the present invention may be used to display two or more video streams having frame rates other than those in the above-described examples." 6: 36-39. FIG. 2, including Video Capture Controller 204, Memory Device 208, Graphics/Display Controller 210 and accompanying text. To the extent the reference does not explicitly disclose externally derived operator commands, this limitation is inherent in this disclosure.

EXHIBIT 19

#	USP 5,625,410	U.S. Patent No. 5,144,661 Filing date: 9/1/1992 Issue date: 2/11/1991
	Asserted claims	**Shamosh**
8.1	8. The method of simultaneously displaying and storing multiple video images, comprising the steps of:	"A security protection system comprises sensors to detect an alarm condition and a controller that controls the operation of a still-video and audio recording unit. When the sensors activate the controller... the video and audio signals from the recording unit are converted to digital and stored on a magnetic disk. The converted signals are also transmitted through a modem to a base location for contemporaneous monitoring of events which triggered the sensor." Abstract. "Memory means store the converted signals, and transmission means transmit the converted signals to a base unit at a remote location." 1: 67 – 2: 2. "In accordance with a second aspect of the invention, a method of recording, storing and observing at a remote location events relating to an alarm condition." 2: 27-30.
8.2	receiving video images from a plurality of sources;	"The system includes alarm sensors 12, which are connected to a control sequencer 14... The control sequencer 14 is connected to lights 20 and to a sequence time controller 22." 3: 1-17. "Among other functions, the sequence time controller 22 controls the operation of a video/audio recording unit 24... An example of a suitable recording unit 24 is the recording unit used in the Sony MAVICA A10 still video camera." 3: 35-40. FIG. 1, including Sensors 12, Control Sequencer 14 and Sequence Time Controller 22 and accompanying text. FIG. 5, including Video/Audio Recording Units 24 and accompanying text. FIG. 6, including Video/Audio Recording Units 24 and accompanying text.
8.3	digitizing one or more of the images if not already in digital form;	"The recording unit 24 outputs its signals to a memory unit converter 26, which, in the preferred embodiment, converts the signals from the recording unit 24 to digital form and maintains an address register." 2: 64-68. FIG. 1, including Memory Unit Converter and accompanying text.
8.4	displaying at least certain of the digitized images in separate windows on a display device, using a first, predetermined frame rate and resolution associated with each window; and	"The modem 42 transmits the received signals to a computer 46... The computer 46 then stores the signals by conventional means, and displays or broadcasts the received video and audio information on a video monitor and sound display 48... The display comprises a standard video monitor, such as a SONY PVM1390." 4: 41-51. FIG. 2, including Video Monitor and Sound Display and accompanying text.
8.5	simultaneously storing the displayed images using a second, predetermined frame rate and resolution associated with each image.	"The converter 26 transmits the converted signals to a memory unit 28 for storage. In the preferred embodiment, the memory unit 28 comprises a 2' floppy magnetic disk with accompanying read/write head, which has the storage capacity of 25 to 50 still video images with accompanying audio." 4: 3-6.

#	USP 5,625,410	U.S. Patent No. 5,144,661 Filing date: 9/1/1992 Issue date: 2/11/1991
		FIG. 1, including Memory Unit 28 and accompanying text.
12.1	12. The method of simultaneously displaying and storing multiple video images, comprising the steps of:	"A security protection system comprises sensors to detect an alarm condition and a controller that controls the operation of a still-video and audio recording unit. When the sensors activate the controller... the video and audio signals from the recording unit are converted to digital and stored on a magnetic disk. The converted signals are also transmitted through a modem to a base location for contemporaneous monitoring of events which triggered the sensor." Abstract. "Memory means store the converted signals, and transmission means transmit the converted signals to a base unit at a remote location." 1: 67 – 2: 2. "In accordance with a second aspect of the invention, a method of recording, storing and observing at a remote location events relating to an alarm condition." 2: 27-30.
12.2	receiving video images from a plurality of sources;	"The system includes alarm sensors 12, which are connected to a control sequencer 14... The control sequencer 14 is connected to lights 20 and to a sequence time controller 22." 3: 1-17. "Among other functions, the sequence time controller 22 controls the operation of a video/audio recording unit 24... An example of a suitable recording unit 24 is the recording unit used in the Sony MAVICA A10 still video camera." 3: 35-40. FIG. 1, including Sensors 12, Control Sequencer 14 and Sequence Time Controller 22 and accompanying text. FIG. 5, including Video/Audio Recording Units 24 and accompanying text. FIG. 6, including Video/Audio Recording Units 24 and accompanying text.
12.3	digitizing one or more of the images if not already in digital form;	"The recording unit 24 outputs its signals to a memory unit converter 26, which, in the preferred embodiment, converts the signals from the recording unit 24 to digital form and maintains an address register." 2: 64-68.
12.4	displaying at least certain of the digitized images in separate windows on a display device, using a first set of temporal and spatial parameters associated with each image in each window;	"The modem 42 transmits the received signals to a computer 46... The computer 46 then stores the signals by conventional means, and displays or broadcasts the received video and audio information on a video monitor and sound display 48... The display comprises a standard video monitor, such as a SONY PVM1390." 4: 41-51. FIG. 2, including Video Monitor and Sound Display and accompanying text.
12.5	simultaneously storing the displayed images using a second set of temporal and spatial parameters associated with each image.	"The converter 26 transmits the converted signals to a memory unit 28 for storage. In the preferred embodiment, the memory unit 28 comprises a 2" floppy magnetic disk with accompanying read/write head, which has the storage capacity of 25 to 50 still video images with accompanying audio." 4: 3-6. FIG. 1, including Memory Unit 28 and accompanying text.
15.1	15. A video storage and display system, comprising:	"A security protection system comprises sensors to detect an alarm condition and a controller that controls the operation of a still-video and

#	USP 5,625,410	U.S. Patent No. 5,144,661 Filing date: 9/1/1992 Issue date: 2/11/1991
		audio recording unit. When the sensors activate the controller… the video and audio signals from the recording unit are converted to digital and stored on a magnetic disk. The converted signals are also transmitted through a modem to a base location for contemporaneous monitoring of events which triggered the sensor." Abstract. "Memory means store the converted signals, and transmission means transmit the converted signals to a base unit at a remote location." 1: 67 – 2: 2. "In accordance with a second aspect of the invention, a method of recording, storing and observing at a remote location events relating to an alarm condition." 2: 27-30.
15.2	a plurality of video cameras, each outputting a signal representative of a video image;	"Among other functions, the sequence time controller 22 controls the operation of a video/audio recording unit 24… An example of a suitable recording unit 24 is the recording unit used in the Sony MAVICA A10 still video camera." 3: 35-40. FIG. 5, including Video/Audio Recording Unit 24 and accompanying text. FIG. 6, including Video/Audio Recording Unit 24 and accompanying text. To the extent the reference does not explicitly disclose a plurality of video cameras each outputting a signal representative of a video image, this limitation is inherent in this disclosure.
15.3	means to receive the signals from each camera and digitally compress the images; and	Means to receive the signals from each camera and digitally compress the images is Memory Unit Converter 26. "The recording unit 24 outputs its signals to a memory unit converter 26, which, in the preferred embodiment, converts the signals from the recording unit 24 to digital form and maintains an address register." 2: 64-68.
15.4	a computer configured to receive the digitally compressed images, the computer being interfaced to the following devices:	"A computer in the base unit controls the visual and audio presentation of the converted signals, and controls the video and audio recording means, the memory converter means, and the transmission means." 2: 18-21.
15.5	a display screen,	FIG. 2, including Video Monitor and Sound Display and accompanying text.
15.6	means to receive externally derived operator commands including means for sensing a deviation from the normal-state image scene associated with at least one of the video cameras, the existence of the deviation being used as the basis for generating an externally derived command, and	Means to receive externally derived operator commands is Manual Activation Pad 16 and Control Sequencer 1. Means for sensing a deviation from the normal-state image scene associated with at least one of the video cameras is Alarm Sensors 12. "A security protection system comprises sensors to detect an alarm condition and a controller that controls the operation of a still-video and audio recording unit." Abstract. "The alarm sensors 12 may include sensors of weight, movement, the presence of smoke or other materials, or any other type of suitable alarm sensor." 3: 2-5. "A manual activation pad 16, consisting in the preferred embodiment of a

#	USP 5,625,410	U.S. Patent No. 5,144,661 Filing date: 9/1/1992 Issue date: 2/11/1991
		single button to be pushed, is also connected to the control sequencer 14." 3: 5-8.
15.7	a high-capacity storage medium, and programmed to perform the following functions:	"The converter 26 transmits the converted signals to a memory unit 28 for storage. In the preferred embodiment, the memory unit 28 comprises a 2" floppy magnetic disk with accompanying read/write head, which has the storage capacity of 25 to 50 still video images with accompanying audio." 4: 3-6. FIG. 1, including Memory Unit 28 and accompanying text.
15.8	display the digitally compressed images from the cameras in different windows on the display screen, each window being associated with an update rate and dimensions in pixels,	"The modem 42 transmits the received signals to a computer 46... The computer 46 then stores the signals by conventional means, and displays or broadcasts the received video and audio information on a video monitor and sound display 48... The display comprises a standard video monitor, such as a SONY PVM1390." 4: 41-51. FIG. 2, including Video Monitor and Sound Display and accompanying text.
15.9	vary the dimensions and the rate at which a particular image is updated in its window in accordance with one of the externally derived commands,	"A manual activation pad 16, consisting in the preferred embodiment of a single button to be pushed, is also connected to the control sequencer 14." 3: 5-8. To the extent the reference does not explicitly disclose varying the dimensions and the rate at which a particular image is updated in its window, this limitation is inherent in this disclosure.
15.10	store the digitally compressed images in the high-capacity storage medium, and	"The converter 26 transmits the converted signals to a memory unit 28 for storage. In the preferred embodiment, the memory unit 28 comprises a 2" floppy magnetic disk with accompanying read/write head, which has the storage capacity of 25 to 50 still video images with accompanying audio." 4: 3-6. FIG. 1, including Memory Unit 28 and accompanying text.
15.11	vary the dimensions and the rate at which a particular image is stored in accordance with one of the externally derived commands.	"A manual activation pad 16, consisting in the preferred embodiment of a single button to be pushed, is also connected to the control sequencer 14." 3: 5-8. "The converter 26 transmits the converted signals to a memory unit 28 for storage. In the preferred embodiment, the memory unit 28 comprises a 2" floppy magnetic disk with accompanying read/write head, which has the storage capacity of 25 to 50 still video images with accompanying audio." 4: 3-6. FIG. 1, including Memory Unit 28 and accompanying text.

EXHIBIT 20

#	USP 5,625,410	U.S. Patent No. 4,777,526 Filing date: 10/11/1988 Issue date: 6/5/1987
	Asserted claims	**Saitoh**
8.1	8. The method of simultaneously displaying and storing multiple video images, comprising the steps of:	"A security monitor system is designed to transmit video signals from a plurality of video information sources via a common transmission line... Therefore, the security monitor system... is satisfactory for recording video information of a variety of monitoring areas, when movement in the picture of one of the monitoring areas is detected, by means of a video tape recorder or other appropriate recording means." Abstract. "Therefore, the picture showing respective monitoring areas can be reproduced on a television monitor screen by setting the channels set at the frequencies f4, f5, f6 and f7." 4: 68 – 5: 3.
8.2	receiving video images from a plurality of sources;	"According to another aspect of the invention, a security monitor system comprises a plurality of image pick-up devices, each provided for monitoring a preselected monitoring area." 2: 65-68. "The shown embodiment of the security monitor system is directed to monitor four monitoring areas by means of four video cameras 4a, 4b, 4c and 4d.... The video information obtained via the video cameras 4a, 4b, 4c and 4d is transmitted through a common video signal transmission line 1." 3: 44-54. FIG. 1 and accompanying text.
8.3	digitizing one or more of the images if not already in digital form;	To the extent the reference does not explicitly disclose digitizing one or more of the images if not already in digital form, this limitation is inherent in this disclosure.
8.4	displaying at least certain of the digitized images in separate windows on a display device, using a first, predetermined frame rate and resolution associated with each window; and	"Therefore, the picture showing respective monitoring areas can be reproduced on a television monitor screen by setting the channels set at the frequencies f4, f5, f6 and f7." 4: 68 – 5: 3. "On the other hand, the channel switcher circuit 14 is connected to the tuner circuit 15 for outputting a channel switching command which contains data identifying the selected one of the first, second, third and fourth monitoring channels, for selecting the monitoring area to be displayed on the video monitor 18." 5: 25-31. FIG. 1, including 18 and accompanying text.
8.5	simultaneously storing the displayed images using a second, predetermined frame rate and resolution associated with each image.	"The detector circuit 17 incorporates a memory for temporarily storing each field of the video information. The memory in the detector circuit 17 also stores the data indicative of the monitoring channel corresponding to the stored video information." 5: 55-59. FIG. 1, including Detector 17 and accompanying text.
12.1	12. The method of simultaneously displaying and storing multiple video images, comprising the steps of:	"A security monitor system is designed to transmit video signals from a plurality of video information sources via a common transmission line... Therefore, the security monitor system... is satisfactory for recording

#	USP 5,625,410	U.S. Patent No. 4,777,526 Filing date: 10/11/1988 Issue date: 6/5/1987
		video information of a variety of monitoring areas, when movement in the picture of one of the monitoring areas is detected, by means of a video tape recorder or other appropriate recording means." Abstract. "Therefore, the picture showing respective monitoring areas can be reproduced on a television monitor screen by setting the channels set at the frequencies f4, f5, f6 and f7." 4: 68 – 5: 3.
12.2	receiving video images from a plurality of sources;	"According to another aspect of the invention, a security monitor system comprises a plurality of image pick-up devices, each provided for monitoring a preselected monitoring area." 2: 65-68. "The shown embodiment of the security monitor system is directed to monitor four monitoring areas by means of four video cameras 4a, 4b, 4c and 4d.... The video information obtained via the video cameras 4a, 4b, 4c and 4d is transmitted through a common video signal transmission line 1." 3: 44-54. FIG. 1 and accompanying text.
12.3	digitizing one or more of the images if not already in digital form;	To the extent the reference does not explicitly disclose digitizing one or more of the images if not already in digital form, this limitation is inherent in this disclosure.
12.4	displaying at least certain of the digitized images in separate windows on a display device, using a first set of temporal and spatial parameters associated with each image in each window;	"Therefore, the picture showing respective monitoring areas can be reproduced on a television monitor screen by setting the channels set at the frequencies f4, f5, f6 and f7." 4: 68 – 5: 3. "On the other hand, the channel switcher circuit 14 is connected to the tuner circuit 15 for outputting a channel switching command which contains data identifying the selected one of the first, second, third and fourth monitoring channels, for selecting the monitoring area to be displayed on the video monitor 18." 5: 25-31. FIG. 1, including 18 and accompanying text.
12.5	simultaneously storing the displayed images using a second set of temporal and spatial parameters associated with each image.	"The detector circuit 17 incorporates a memory for temporarily storing each field of the video information. The memory in the detector circuit 17 also stores the data indicative of the monitoring channel corresponding to the stored video information." 5: 55-59. FIG. 1, including Detector 17 and accompanying text.
15.1	15. A video storage and display system, comprising:	"A security monitor system is designed to transmit video signals from a plurality of video information sources via a common transmission line... Therefore, the security monitor system... is satisfactory for recording video information of a variety of monitoring areas, when movement in the picture of one of the monitoring areas is detected, by means of a video tape recorder or other appropriate recording means." Abstract. "Therefore, the picture showing respective monitoring areas can be reproduced on a television monitor screen by setting the channels set at the frequencies f4, f5, f6 and f7." 4: 68 – 5: 3.
15.2	a plurality of video cameras, each	"According to another aspect of the invention, a security monitor system

#	USP 5,625,410	U.S. Patent No. 4,777,526 Filing date: 10/11/1988 Issue date: 6/5/1987
	outputting a signal representative of a video image;	comprises a plurality of image pick-up devices, each provided for monitoring a preselected monitoring area." 2: 65-68. "The shown embodiment of the security monitor system is directed to monitor four monitoring areas by means of four video cameras 4a, 4b, 4c and 4d.... The video information obtained via the video cameras 4a, 4b, 4c and 4d is transmitted through a common video signal transmission line 1." 3: 44-54. "Furthermore, since the channel containing signals from each of the video cameras is displayed at given intervals, a plurality of monitoring areas can be monitored until substantial movement in the picture of one of the monitoring areas is detected." 7: 30-34. FIG. 1 and accompanying text.
15.3	means to receive the signals from each camera and digitally compress the images; and	To the extent the reference does not explicitly disclose means to receive the signals from each camera and digitally compress the images, this limitation is inherent in this disclosure.
15.4	a computer configured to receive the digitally compressed images, the computer being interfaced to the following devices:	"A scanning control circuit 13 is also connected to the coaxial cable 1 to receive therefrom respective monitoring channel signals." 5: 17-19. FIG. 1 and accompanying text.
15.5	a display screen,	FIG. 1, including 18 and accompanying text.
15.6	means to receive externally derived operator commands including means for sensing a deviation from the normal-state image scene associated with at least one of the video cameras, the existence of the deviation being used as the basis for generating an externally derived command, and	Means for sensing a deviation from the normal-state image scene associated with at least one of the video cameras is System Controller 12, Detector 17, and Video Rectifier Circuit 16b. "An automatic recognition may be facilitated in the security monitor system for detecting substantial and noticeable movement within a picture derived from the video information from each of the video signal sources." Abstract. "For example, the system controller 12 outputs an alarm signal when noticeable movement or change in picture showing one of the monitoring areas is detected." 5: 10-13. "The detector compares the video information received from the video rectifier circuit 16b with the read out video information stored therein." 5: 68 – 6: 2. To the extent the reference does not explicitly disclose means to receive externally derived operator commands, this limitation is inherent in this disclosure.
15.7	a high-capacity storage medium, and programmed to perform the following functions:	"The detector circuit 17 incorporates a memory for temporarily storing each field of the video information. The memory in the detector circuit 17 also stores the data indicative of the monitoring channel corresponding to the stored video information." 5: 55-59.

#	USP 5,625,410	U.S. Patent No. 4,777,525 Filing date: 10/11/1988 Issue date: 6/5/1987
		FIG. 1, including Detector 17 and accompanying text.
15.8	display the digitally compressed images from the cameras in different windows on the display screen, each window being associated with an update rate and dimensions in pixels,	"Therefore, the picture showing respective monitoring areas can be reproduced on a television monitor screen by setting the channels set at the frequencies f4, f5, f6 and f7." 4: 68 – 5: 3. "On the other hand, the channel switcher circuit 14 is connected to the tuner circuit 15 for outputting a channel switching command which contains data identifying the selected one of the first, second, third and fourth monitoring channels, for selecting the monitoring area to be displayed on the video monitor 18." 5: 25-31. FIG. 1, including 18 and accompanying text.
15.9	vary the dimensions and the rate at which a particular image is updated in its window in accordance with one of the externally derived commands,	"Therefore, the picture showing respective monitoring areas can be reproduced on a television monitor screen by setting the channels set at the frequencies f4, f5, f6 and f7." 4: 68 – 5: 3. To the extent the reference does not explicitly disclose varying the dimensions and the rate at which a particular image is updated in its window in accordance with one of the externally derived commands, this limitation is inherent in this disclosure.
15.10	store the digitally compressed images in the high-capacity storage medium, and	"The detector circuit 17 incorporates a memory for temporarily storing each field of the video information. The memory in the detector circuit 17 also stores the data indicative of the monitoring channel corresponding to the stored video information." 5: 55-59. FIG. 1, including Detector 17 and accompanying text.
15.11	vary the dimensions and the rate at which a particular image is stored in accordance with one of the externally derived commands.	"The detector circuit 17 incorporates a memory for temporarily storing each field of the video information. The memory in the detector circuit 17 also stores the data indicative of the monitoring channel corresponding to the stored video information." 5: 55-59. FIG. 1, including Detector 17 and accompanying text. To the extent the reference does not explicitly disclose externally derived operator commands, this limitation is inherent in this disclosure.

EXHIBIT 21

#	USP 5,625,410	H6-70277 Publication date: 3/11/1994
	Asserted claims	**Sato**
8.1	8. The method of simultaneously displaying and storing multiple video images, comprising the steps of:	"To provide a crime prevention/monitoring system that reduces the memory consumption of image data in a fixed point automatic imaging/recording device to facilitate data storage and processing." Abstract. "In the example shown herein, [the fixed point automatic imaging/recording device] comprises…a high capacity memory; and a monitor for monitoring." 0012. FIG. 1, including Monitor for Monitoring and High-Capacity Storage and accompanying text.
8.2	receiving video images from a plurality of sources;	"In the example shown herein, [the fixed point automatic imaging/recording device] comprises a camera for imaging the images." 0012. "The video from the camera is displayed on the monitor for monitoring." 0013. FIG. 1, including Camera and accompanying text. To the extent the reference does not explicitly disclose receiving video images from a plurality of sources, this limitation is inherent in this disclosure.
8.3	digitizing one or more of the images if not already in digital form;	"In the example shown herein, [the fixed point automatic imaging/recording device] comprises…A/D converter for digitizing the data." 0012. "…and the camera image that is obtained at the recording timing that has been set is digitized by the A/D converter." 0013. "Data compression is also performed on the differential data, and [the result] is stored in a high-capacity memory device." 0014. FIG. 1, including A/D Converter and accompanying text.
8.4	displaying at least certain of the digitized images in separate windows on a display device, using a first, predetermined frame rate and resolution associated with each window; and	"In the example shown herein, [the fixed point automatic imaging/recording device] comprises…a monitor for monitoring." 0012. "The video from the camera is displayed on the monitor for monitoring." 0013. FIG. 1, including Monitor for Monitoring and accompanying text.
8.5	simultaneously storing the displayed images using a second, predetermined frame rate and resolution associated with each image.	"[I]n the present invention a basic status of an image captured by a camera… is saved as reference data, and after applying data compression to differential data…the differential data is stored in a memory device." 0011. "In the example shown herein, [the fixed point automatic imaging/recording device] comprises…a high capacity memory." 0012. "The digitized image data is stored in a buffer temporarily." 0014. "Data compression is also performed on the differential data, and [the result] is stored in a high-capacity memory device." 0014.

#	USP 5,625,410	H6-70277 Publication date: 3/11/1994
		FIG. 1, including High-Capacity Storage and accompanying text.
12.1	12. The method of simultaneously displaying and storing multiple video images, comprising the steps of:	"To provide a crime prevention/monitoring system that reduces the memory consumption of image data in a fixed point automatic imaging/recording device to facilitate data storage and processing." Abstract. "In the example shown herein, [the fixed point automatic imaging/recording device] comprises...a high capacity memory; and a monitor for monitoring." 0012. FIG. 1, including Monitor for Monitoring and High-Capacity Storage and accompanying text.
12.2	receiving video images from a plurality of sources;	"In the example shown herein, [the fixed point automatic imaging/recording device] comprises a camera for imaging the images." 0012. "The video from the camera is displayed on the monitor for monitoring." 0013. FIG. 1, including Camera and accompanying text. To the extent the reference does not explicitly disclose receiving video images from a plurality of sources, this limitation is inherent in this disclosure.
12.3	digitizing one or more of the images if not already in digital form;	"In the example shown herein, [the fixed point automatic imaging/recording device] comprises...A/D converter for digitizing the data." 0012. "...and the camera image that is obtained at the recording timing that has been set is digitized by the A/D converter." 0013. "Data compression is also performed on the differential data, and [the result] is stored in a high-capacity memory device." 0014. FIG. 1, including A/D Converter and accompanying text.
12.4	displaying at least certain of the digitized images in separate windows on a display device, using a first set of temporal and spatial parameters associated with each image in each window;	"In the example shown herein, [the fixed point automatic imaging/recording device] comprises...a monitor for monitoring." 0012. "The video from the camera is displayed on the monitor for monitoring." 0013. FIG. 1, including Monitor for Monitoring and accompanying text.
12.5	simultaneously storing the displayed images using a second set of temporal and spatial parameters associated with each image.	"[I]n the present invention a basic status of an image captured by a camera... is saved as reference data, and after applying data compression to differential data...the differential data is stored in a memory device." 0011. "In the example shown herein, [the fixed point automatic imaging/recording device] comprises...a high capacity memory." 0012. "The digitized image data is stored in a buffer temporarily." 0014. "Data compression is also performed on the differential data, and [the

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		result] is stored in a high-capacity memory device." 0014. FIG. 1, including High-Capacity Storage and accompanying text.
15.1	15. A video storage and display system, comprising:	"To provide a crime prevention/monitoring system that reduces the memory consumption of image data in a fixed point automatic imaging/recording device to facilitate data storage and processing." Abstract. "In the example shown herein, [the fixed point automatic imaging/recording device] comprises...a high capacity memory; and a monitor for monitoring." 0012. FIG. 1, including Monitor for Monitoring and High-Capacity Storage and accompanying text.
15.2	a plurality of video cameras, each outputting a signal representative of a video image;	"In the example shown herein, [the fixed point automatic imaging/recording device] comprises a camera for imaging the images." 0012. "The video from the camera is displayed on the monitor for monitoring." 0013. FIG. 1, including Camera and accompanying text. To the extent the reference does not explicitly disclose a plurality of video cameras each outputting a signal representative of a video image, this limitation is inherent in this disclosure.
15.3	means to receive the signals from each camera and digitally compress the images; and	Means to receive the signals from each camera and digitally compress the images is A/D converter. "In the example shown herein, [the fixed point automatic imaging/recording device] comprises...A/D converter for digitizing the data." 0012. "...and the camera image that is obtained at the recording timing that has been set is digitized by the A/D converter." 0013. "Data compression is also performed on the differential data, and [the result] is stored in a high-capacity memory device." 0014. FIG. 1, A/D Converter and accompanying text.
15.4	a computer configured to receive the digitally compressed images, the computer being interfaced to the following devices:	"The digitized image data is stored in a buffer temporarily. The digitized image data and reference data are sent to a comparison buffer, and differential data is calculated by a comparison." 0014. FIG. 1, including Data Buffer and Comparison Buffer and accompanying text.
15.5	a display screen,	FIG. 1, including Monitor for Monitoring and accompanying text.
15.6	means to receive externally derived operator commands including means for sensing a deviation from the normal-state image scene associated with at least one of the video cameras, the existence of the deviation being used as the basis for generating an externally	Means to receive externally derived operator commands is Inputting Device. FIG. 3, including Inputting Device and accompanying text. To the extent the reference does not explicitly disclose means for sensing a deviation fro the normal-state image scene associated with at

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	derived command, and	least one of the cameras, this limitation is inherent in this disclosure.
15.7	a high-capacity storage medium, and programmed to perform the following functions:	"[I]n the present invention a basic status of an image captured by a camera... is saved as reference data, and after applying data compression to differential data...the differential data is stored in a memory device." 0011. "In the example shown herein, [the fixed point automatic imaging/recording device] comprises...a high capacity memory." 0012. "The digitized image data is stored in a buffer temporarily." 0014. "Data compression is also performed on the differential data, and [the result] is stored in a high-capacity memory device." 0014. FIG. 1, including High-Capacity Storage and accompanying text.
15.8	display the digitally compressed images from the cameras in different windows on the display screen, each window being associated with an update rate and dimensions in pixels,	"In the example shown herein, [the fixed point automatic imaging/recording device] comprises...a monitor for monitoring." 0012. "The video from the camera is displayed on the monitor for monitoring." 0013. FIG. 1, including Monitor for Monitoring
15.9	vary the dimensions and the rate at which a particular image is updated in its window in accordance with one of the externally derived commands,	"In the example shown herein, [the fixed point automatic imaging/recording device] comprises...a timer counter for controlling the monitoring at specific intervals." 0012. "The video from the camera is displayed on the monitor for monitoring." 0013. "At fixed time intervals, for example, once every 10 seconds, a timing that is outputted from the timer counter, which has been set up so as to produce a signal, is referenced, and the camera image that is obtained at the recording timing that has been set is digitized by the A/D converter." 0013.
15.10	store the digitally compressed images in the high-capacity storage medium, and	"[I]n the present invention a basic status of an image captured by a camera... is saved as reference data, and after applying data compression to differential data...the differential data is stored in a memory device." 0011. "In the example shown herein, [the fixed point automatic imaging/recording device] comprises...a high capacity memory." 0012. "The digitized image data is stored in a buffer temporarily." 0014. "Data compression is also performed on the differential data, and [the result] is stored in a high-capacity memory device." 0014. FIG. 1, including High-Capacity Storage and accompanying text.
15.11	vary the dimensions and the rate at which a particular image is stored in accordance with one of the externally derived commands.	"[I]n the present invention a basic status of an image captured by a camera... is saved as reference data, and after applying data compression to differential data...the differential data is stored in a memory device." 0011.

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		"In the example shown herein, [the fixed point automatic imaging/recording device] comprises...a high capacity memory." 0012. FIG. 1, including High-Capacity Storage and accompanying text.